



SEPTEMBER 1993

The Foundation For Amateur Radio, Inc.®
Announces

The 36th Annual

F.A.R.FEST®

'93



SUNDAY, SEPTEMBER 12, 1993

Montgomery County Agricultural Center (Fairgrounds)
Gaithersburg, Maryland
(Exit 11 off I-270)

- ★ Tailgating
- ★ Manufacturer's Reps
- ★ Commercial
- ★ Flea Markets
- ★ Exams

GATES OPEN 6:00 AM
COMMERCIAL BUILDINGS OPEN 8:00 AM

General Admission:
\$5.00 Adults
Children under 12 Free

TALK-IN: 146.955-
443.400+
146.52 Simplex

RESERVATIONS

All requests for
advance table and
space reservations
contact
Mary Morris
(703) 971-3905

GENERAL INFORMATION

All other information
contact
Tony Young
(301) 262-1917

TailGate: \$12.00 (Standard Space and one General Admission ticket)

Auto-Call is the Official Journal of the Foundation For Amateur Radio, Inc.®

\$1.00

MARYLAND RADIO CENTER

Authorized dealer for :

Kenwood, Icom, TenTec, AEA, Kantronics,
 Spi-ro, Barker/Williamson, Alpha Delta,
 MFJ, ARRL Books, Callbook, Sams books,
 Mirage/KLM, Benchner, Cushcraft, Hustler,
 Lakeview, SMC mounts, the Pouch, Diamond,
 Amidon, Butternut, Cable Factory, Larsen,
 Nye, Vanco, VanGorden, Vibroplex, DRSI,
 Covercraft, Antenna Specialists, Daiwa,
 Astron

Nationwide Order Line

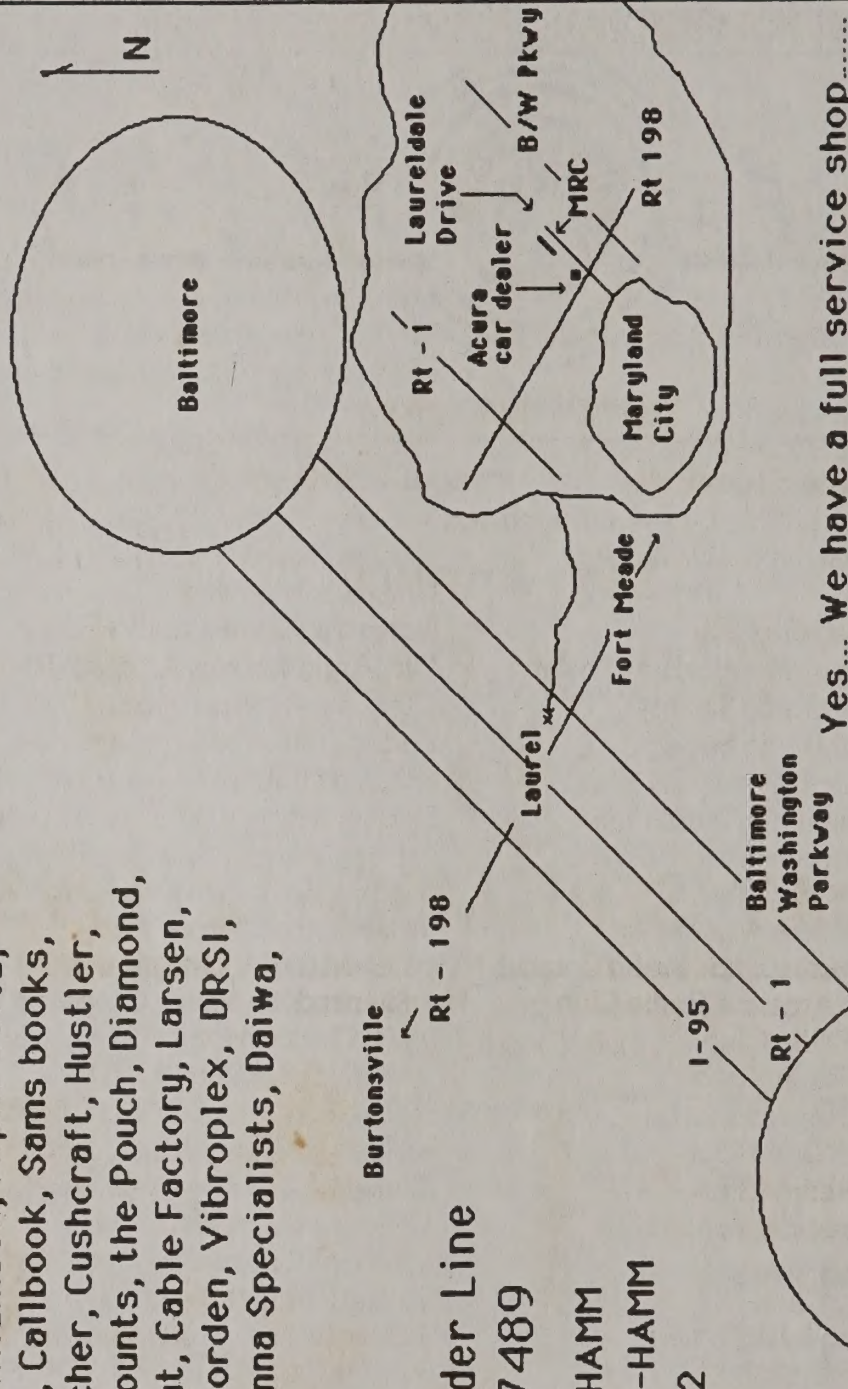
1-800-447-7489

Baltimore - 880-HAMM

Washington - 470-HAMM

Laurel - 725-1212

FAX - 725-1198



Yes... We have a full service shop.....

Check out our technical library !

Ham exams the third Saturday
 of the month. FREE !!

Open Mon. - Fri. 10AM - 6PM

Saturday 10AM - 4PM



MEMBER CLUBS

Adams County Amateur Radio Society
Alexandria Radio Club
Amateur Radio Research and Development Corp.
Anne Arundel Radio Club
AMSAT-Radio Amateur Satellite Corporation
Antietam Radio Association, Inc
ARINC Amateur Radio Club
Arlington Amateur Radio Club Baltimore
Amateur Radio Club
Baltimore Amateur Radio Club
Baltimore Radio Amateur Television Society
Capital City Amateur Radio Society
Capitol Hill Amateur Radio Society
Carroll County Amateur Radio Club
Central Maryland Amateur Radio Club
Chaverim of the Greater Washington Area
Columbia Amateur Radio Club
Culpeper Amateur Radio Association
D-MARC - Digital MidAtlantic Radio Council
Department of State Amateur Radio Club
Fauquier Amateur Radio Club
Frederick Amateur Radio Club
Frederick Amateur Repeater Group
Friendship Amateur Radio Club
Goddard Amateur Radio Club
Green Mountain Repeater Association
Herndon Repeater Group
IBM Amateur Radio Club
John Hopkins University APL ARC
Laurel Amateur Radio Club
Leisure World Amateur Radio Club
MD/DC MARS (Navy-Marine) Association
MADRAS
Maryland Emergency Phone Net
Maryland FM Association
Maryland Mobileers Amateur Radio Club
Mercury Amateur Radio Assn., NE Area
Metrovision Amateur TV Club

Metropolitan Communications Network
Mid-Atlantic DX & Repeater Assn.
Montgomery Amateur Radio Club
Montgomery Auxiliary Communications Service
Moose Amateur Radio Club
Mount Vernon Amateur Radio Club
National Capitol DX Association
Naval Research Laboratory Radio Club
Northern Virginia FM Association
Northern Virginia Radio Club
Ole Virginia Hams Amateur Radio Club
Pentagon Amateur Radio Club
Potomac Area VHF Society
Potomac Valley Radio Club
Prince George's Wireless Association, Inc.
Prince George's County ARES/RACES
Quarter Century Wireless Association, Inc.
 Baltimore Chapter #20
 Del-Mar-VA Chapter #150
 Shenandoah Valley Chapter #137
 Vic Clark Chapter #91
 Washington Chapter #23
Rock Creek Amateur Radio Association
St. Mary's County Amateur Radio Association
Shenandoah Valley Amateur Radio Club
Southern Maryland Amateur Radio Club
Southern Patuxent Amateur Radio Club
Springfield Estates Elementary School ARC
Stafford Amateur Radio Assn.
Sterling Park Amateur Radio Club
Summit Amateur Radio association
Tri-County Amateur Radio Club
T-MARC, Middle Atlantic Repeater Council
Vienna Wireless Society
Voice of America Amateur Radio Club
Washington Adventist Amateur Radio Assn.
Washington Area Young Ladies ARC
Woodbridge Wireless, Inc.

AUTO-CALL

Official Journal of the Foundation for Amateur Radio

Foundation President	Tony Young, WA3YLO (301) 262-1917
Executive Vice President	Mary Morris, N4TCI (703) 971-3905
Admin. Vice President	Vikki Gigante-Huber, KA3PVS (301) 249-2609
Vice President	Robert Armstrong, WA4SQL (703) 751-2294
Vice President	Hugh Turnbull, W3ABC (301) 927-1797
Vice President	John Chitwood, K3RGB (301) 799-7360
Vice President	Chuck Sommer, N4OSD
Treasurer	Mildred Mumford, N3KGO (301) 577-6659
Recording Secretary	Joe Seasey, KA3UZI (301) 725-5822
Corresponding Secretary	Ethel Smith, K4LMB (703) 536-8469

AUTO-CALL MAGAZINE STAFF

Editor	Doug Allen, N3FHM (410) 437-6258
Circulation Manager	John Swafford, W4HU (703) 536-9537

Deadline for copy is the 5th of the month. All contributions are welcomed, but the editor does reserve the right to edit or reject any portion of any copy.

AUTO-CALL Copyright 1992. Permission is granted by FAR to reprint from this publication provided credit is given.

AUTO-CALL is published monthly as the Official Journal of the Foundation for Amateur Radio. Comments made by columnists do not necessarily reflect the opinions of the Foundation. No effort is made to investigate advertisers, therefore no warranty can be applied.

AUTO-CALL has paid subscriptions of over 1,700 and a total circulation of about 2,000. Copies are sold at local stores and a number of Complimentary and Swap copies are mailed each month. The magazine is entered as third class non-profit matter at the post office at Arlington, VA.

Subscription rate is \$8 per year.

Subscriptions received after the 15th of the month will be started with the following month's issue.

Columns

Coming Events	5
Meet Your Trustee	7
FCC Highlights	8
ARRL Report	11
DX DX DX	16
Elmer's Corner	18
Volunteer Examiner Co-op	19
Training	23
Roaring Thunder	24
Traning Classes	25
MEPN Report	26

Club Reports

IBM Amateur Radio Club	31
Montgomery Amateur Radio Club	32
Fauquier Amateur Radio Club	33
Tri-County Amateur Radio Club	34
Southern Maryland Amateur Radio Club	35
Maryland Mobileers Amateur Radio Club	35
Rock Creek amateur Radio Association	36
Capitol City Amateur Radio Society	36
Alexandria Radio Club	37
Herndon Repeater Group	38
Southern Patuxent Amateur Radio Club	39
Northern Virginia FM Association	40
Metrovision Amateur TV Club	40
Culpeper Amateur Radio Association	41
Vienna Wireless Society	42
Mount Vernon Amateur Radio Club	43
Anne Arundel Radio Club	44
Green Mountain Repeater Association	45

Advertisers

Maryland Radio Center	2
Electronic Equipment Bank	6
Packet Gadgets	31
2-Land Communications	35
Mugs & Stitches	47
R.F. Connection	48
Amateur Radio of Hagerstown	48
G&G Electronics	49
Ham Radio Outlet	53

COMING EVENTS - 1993

August 22	Moose ARC Hamfest - Towson, MD
August 28	PROS - Chaffee, NY
August 29	Southern Patuxent Hamfest - Upper Marlboro, MD
	Gloucester Co. ARC - Mullica Hill, NJ
September 4-5	Shelby Hamfest - Shelby, NC
September 11	Radio Assn. of Erie - Erie, PA
September 12	F.A.R.Fest 93 - Gaithersburg, MD
	Butler County ARA Hamfest - Butler, PA
September 18	Buffalo Hamfest - Hamburg, PA
	Columbia-Montour ARC - Berwick, PA
September 19	South Jersey Radio Assn. - Pennsauken, NJ
September 25	Elmira, NY
September 25-26	York, PA
October 2-3	Virginia State Convention, Virginia Beach, VA
	Virginia Beach Hamfest, Virginia Beach, VA
October 3	Pack Rats - Warrington, PA
October 16	Radio Amateurs of Greater Syracuse - Baldwinsville, NY
October 17	Penn Wireless Assn. - Bensalem, PA
	CARA - Howard County Fair Grounds, West Friendship, MD
October 24	Foothills ARC - Greensburg, PA
	Mason-Dixon - Westminster, MD
	RF Hill ARC - Sellersville, PA
October 29-30	QCWA National Convention - St. Petersburg, FL.



Sunday, September 12, 1993
Montgomery County Agricultural Center
(Fairgrounds)
Gaithersburg, Maryland
(Exit 11 off I-270)

Conventions & Conferences

- October 2 - Mid-Atlantic VHF Conference - Location TBA
- October 3 - MD/DC Club President's Seminar - U.S. Navel Academy - For More Info. Contact:
 Bill Howard, WB3V at (410) 551-6775

Thanks to Hugh Turnbull- W3ABC and Bob Milligan - KI4MB for providing much of the above information. Please send a copy of your Hamfest flyer to AUTO-CALL and keep us advised of any changes. We are anxious to provide our readers with timely information and help to avoid possible conflicts when scheduling activities.

We can use all the help we can get!

THE NEW GENERATION ROTATORS

THEY'RE NOT YOUR FATHER'S HAM "M"

Model Specs	Rotator Comparison Chart									Old Generation	
	The New Generation									Test Ham/V	Test T2X
Model	RC5	RC5A	RC5B	EMOTO 105TSX	EMOTO 747SRX	EMOTO 1105MSX	EMOTO 1200FOX	EMOTO 1300MSAX	EMOTO 1800FSX		
Rotate	43	116	160	37	50	57	143	215	287	67	83
Torque Ft/Lb											
GD ² Kgm ²	N/A	N/A	N/A	100	400	700	1000	1800	3000	N/A	N/A
Anti Inertia											
Brk Static Torque Ft/Lb	506	1085	1450	215	502	717	1290	1792	2150	417	750
Wind Load in Tower (ft)	10	25	25	11	22	27	27	33	36	15	20
Mast mount	4	5	7	5	9	12	12	15	16	7.5	10
Rotating speed 360°	60-150 sec variable	60-150 sec variable	60-150 sec variable	55	35	65	40	77	80	60	60
Rev Delay	None	2 sec	3 sec							None	None
Preset	Oct 3	Oct 3	yes	no	no	Opt	yes	yes	yes	no	no
Computer	no	no	no	no	yes	yes	yes	yes	yes	no	no
120V 60Hz	80VA	140VA	200VA	70VA	70VA	70VA	90VA	120VA	150VA	26V AC	26V AC
Mast Dia	2-2.5 in	2-2.5 in	2-2.5 in	1.6-2.4 in	1.6-2.4 in	1.6-2.4 in	1.6-2.4 in	2.4-3.1 in	3.5-5.5 in	2 in	2 in
Control wire	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	8 cond	8 cond
Vertical max load #	880	1540	1540	860	1100	880	1760	1760	2200	400	600
Motor wt/Lb	13	17	20	7.5	9	11	11	13	39.5	24	28
Drive type	worm drive	worm drive	worm drive	disk	friction	friction	friction	friction	friction	wedge	wedge
Self center mast clamp	yes	yes	yes	Adj	Adj	Adj	Adj	Adj	Adj	no	no
Special notes	3-6	3-6	3-6	6	1-6	6	2-6	6	6	4-7	4-7
Phoning (ft)	\$269.00	\$449.95	\$799.00	\$209.95	\$399.00	\$589.00	\$799.00	\$1099.00	\$1272.00	\$369.95	\$439.95
With Preset	\$379.00	\$528.95				\$663.00					

Notes:
 1. Turns Tribander 470° in 35 seconds
 4. T2X and Ham/V have same motor and gear train parts
 1. 120V normal 220V special order

2. Variable speed 40 sec max
 5. EEB prices as of 5/91, subject to change
 8. Wind Load in Sq. Feet

3. Variable speed w/SCR constant rotational torque at any speed
 6. 120/220 based Transformer

THE NEW GENERATION

An entire generation of amateurs have grown up knowing only one rotator manufacturer. Those old favorites are still popular. But, now a new generation of rotators are out to set high standards with innovative features such as: large machined steel gears, cast and machined aluminum cases, solid state controllers for smooth start/stop, preset, computer control and circular position indicators.

The bottom line is... strong, long term reliability, ease of operation and cost effectiveness. When you erect an antenna system the last thing you need is rotor problems!

CREATIVE DESIGN ROTATORS

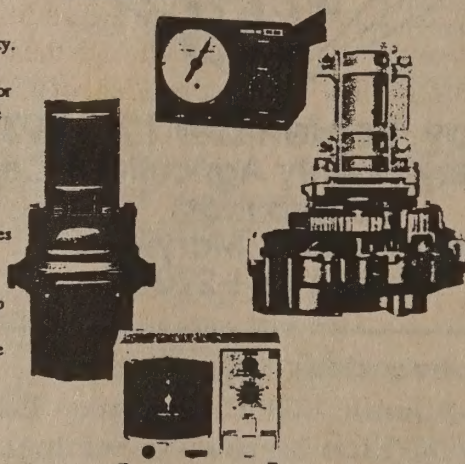
CREATE is serious about long term reliability. The CREATE RC5 series rotators were designed with the serious DX'er in mind. Three models for medium, large and ultra large antenna arrays are available.

ROTOR FEATURES OF RC5 SERIES

- Large strong reduction gear system provides long term reliability during years of rugged operation.
- Worm drive gearing provides powerful braking force and low backlash to keep your antenna in position during severe weather conditions.
- Cast and machined aluminum case provide the strength required for long lasting service.
- Mast clamp guides for ease of mast installation.

CONTROLLER FEATURES OF RC5 SERIES

- Speed control using silicon control rectifiers allows slow speed without reduction in rotation torque. Rotating spec is constant 60 to 200 seconds per 360 degrees.
- Reverse delay control (RDC). Delays reverse command to rotor until antenna is at rest. Prevents damage to rotor antenna and tower system.
- Circular dial indicator, for quick accurate reading of antenna direction. Great circle overlay available for USA (west-cent-east).
- Preset (on 3 models) a must for quick setting of antenna direction. Just turn the knob to the new heading, the rest is automatic. Won't waste your time holding down the brake lever and wait.



EMOTO ROTATORS

More than 60% of all Japan amateurs use EMOTO rotators. Many unique innovations and international patents have made EMOTO number one.

EMOTO has a fool proof method to calculate which of their rotators will satisfy your needs. This GD² formula considers your antenna (s) weight, boom and longest element length. The EMOTO sheet is in metric so one must convert weight 2.2lbs= 1kg and length in meters 3.3ft=1 meter. Calculate your GD² then compare EMOTO GD² spec above.

$$GD^2 = W \times \frac{L^2 + B^2}{12}$$

Where: W: weight of antenna (kg)
 L: length of longest element (m)
 B: length of boom(m)

GD² EXAMPLES: Kgm²

TH7DX (437), TH3JR (63), 205BA (675), DISC7-3 (1300), A3S (61), A4S (173), KLM KT34XA (378), 3 ELE TRIBAND (150), 6 ELE TRIBAND (400), 20M 5 ELE (750), 15M 6 ELE (650), 40M 2 ELE SHORT BOOM (240), 40M 2 ELE FULL BOOM (800), 80M 2 ELE (1500), STACK ARRAYS 10M 5 ELE (60), 15M 5 ELE (200), 20M 5 ELE (750), 60+200+750=1010

EMOTO also has a robust AZ-EL rotator that has computer I/O ports. For those working satellites or EME moon bounce the EV700D5X should do the job, as rotating torque is more than double the YAESU G5400B AZ-EL.

EEB

Electronic Equipment Bank 323 Mill Street, N.E. Vienna, Va. 22180
 Phone (703) 938-3350 Orders 800-368-3270
 Call - Write - FAX - for full detailed flyer
 EEB Your Professional Amateur Dealer

Meet Your Trustee

**Introducing FAR Representative John Wood, WA5IPQ,
Trustee Representing K3VOA, the VOA Amateur Radio Club**

It took about 15 years for John to admit that he's a Washingtonian. He hails from New Mexico, where he brings his "5- land" call sign from. For the first 15 years in the DC area, anytime someone would ask where he's from, the response was New Mexico. Now, with head held high, the response is Washington -more specifically Vienna, Virginia. John still frequents the New Mexico environs... and still has a Heathkit VTVM obtained 30 years ago as a fledgling ham from John Kanode thru Doc Meredith, W5PQA, and Earle Fletcher, W5WRS, at an Albuquerque Amateur Radio Club meeting. Unfortunately, both Doc and Earle, who were but just two of several great "Elmers" John knew in Albuquerque, are now silent keys.

John is an electronics engineer with the Voice of America, and just received his U.S. Government 20 year service pin (he also has a 25 year ARRL pin). Some of that experience was even earned at the FCC, where John is careful to admit that he still has a few friends. His present work involves frequency coordination engineering, at the domestic and international level. He also represents the USIA (parent agency of the VOA) on the Interdepartment Radio Advisory Committee's (IRAC) Frequency Assignment Subcommittee (FAS) and has been lucky enough to have been on several U.S. delegations attending international conferences. So, if you're curious on how the Federal side -- or for that matter, the "private" FCC side of spectrum management -works, you'll have to "button hole" John sometime.

John's "other hobby" is Radio Control model airplanes, and he's a past president of the Northern Virginia Radio Control Club (NVRC). Amateur Radio and RC modeling are excellent compliments; you can fly the little devils on the more exclusive 6 Meter frequencies, and at airplane swap meets fellow NVRC'ers always take 2 Meter HT's, so that they can "bird-dog" good bargains to other ham style modelers also attending. John says of the 300 some members within NVRC, about 10 percent are hams.

The VOA club, K3VOA, presently has 27 members. There are additional VOA hams overseas in the U.S. Foreign Service who maintain contact with the club through the Foreign Service Net, for which John Swafford, W4HU, serves as net control. The current president of K3VOA is Al Brown, WA3FYZ. While full membership status is limited to present and past USIA/VOA, AID, and DOS employees, others may join as "Guest" members. Meetings are usually held lunch hour, monthly, first Thursday. Questions regarding K3VOA may be referred to either John Wood at (202) 619-1759, or Al Brown at (202) 619-2020.

The Foundation For Amateur Radio, Inc.



Washington, DC

FCC HIGHLIGHTS

By Jack Kelleher, W4ZC

PIZZA, ANYONE?

In last months column the FCC's decision on permitted and prohibited communications was anticipated "shortly". The Commission's Report and Order was adopted on July 15, and released on July 28.

The summary of the FCC's action states: "... we have decided to amend the amateur service rules substantially as proposed by the League in order to allow amateur operators more flexibility to provide communications for public service projects as well as to enhance the value of the amateur service in satisfying personal communications needs. Amendment of the rules as the League requests will allow licensees to use amateur service frequencies, for example, to facilitate events such as races and parades, to support educational activities, to provide personal communications such as making appointments and ordering food, to collect data for the National Weather Service, and to provide assistance voluntarily even where there are other authorized radio services available. We believe that this action will expand the benefits derived from the amateur service by the general public as well as amateur service licensees.

The Report and Order states further that: "comments convincingly support the proposal' (to amend the Rules). "Although some comments urge caution to prevent exploitation of the service, they show that the present rules hamper amateur operators from serving the public as well as diminish the value of the amateur service in satisfying personal communication needs. The vast majority of comments support our proposal to relax the prohibition against using the amateur service as an alternative to other services such as the maritime services, land mobile radio services or the cellular telephone service. They believe that the current prohibition is overly cautious and unnecessary. We concur. The capabilities of modern mobile communication services have all but eliminated the incentive to use the amateur service instead of those services. We will relax, therefore, the current prohibition, as proposed, to

provide amateur operators greater flexibility for public service and personal communications."

Specific changes to Part 97.113 (Prohibited Communications) are given in the Appendix to the R&O. For example, retransmission of signals between a space shuttle and its associated earth stations requires that prior approval be obtained from NASA, and that such retransmissions be for the exclusive use of amateur operators.

ANNUAL VEC's CONFERENCE

Volunteer Examiner Coordinators representing more than 98% of all radio operator license examinations conducted in the Amateur Service met on June 17 and 18 in Gettysburgh Pa. Topics covered, as reported in the W5YI Report for July 1, included Question Pools, Telegraphy Standard, Paperwork Efficiency, Question Topic Requirements, Club and Military Recreation Station Call Signs, Temporary Foreign Licensing, Commercial Radio Operator Exams, Examination Accountability, Amateur Radio Call Signs, the Gettysburg Computer System, Reducing Examination Irregularities, and VEC Instructions (guidelines).

The meeting included presentations by some of the many FCC officials who attended the Conference. In particular, John Johnston, Chief of the Special Services Division, spoke on the subject of call signs. His remarks are summarized in the W5YI Report viz: "The Amateur Radio Call Sign System adopted in 1978 provides for 7 prefix blocks, 93 prefixes (AA-AL, K, KA-KZ, N, NA-NZ, W, WA-WZ) 5 format arrangements (1X2, 1X3, 2x1, 2x2 and 2x3) in each of the 10 regions. Although a total of 14,888,860 combinations are possible, only 4% of the available call signs are assigned. Currently, the FCC is processing about 125,000 applications annually at a cost of 2.5 work years.

Continued on next page

The FCC does not have ability to assign specific call signs and the present Group A, B, C, D will remain. A new computer system coming on line shortly is being programmed, however, to provide personalized Amateur call signs, which would require a fee. Johnston would like that fee to go to the FCC to help finance Amateur Radio administration. This would require Congressional legislation.

In the future it might be possible for Amateurs to obtain any unassigned call sign, "will" a call sign to heirs or friends -- or retire it permanently."

WORLD RADIOCOMMUNICATION CONFERENCES

On June 24th the FCC began a proceeding to prepare for a 1993 World Radiocommunication Conference (WRC-93) scheduled for November 15-19 in Geneva Switzerland. (The restructured ITU -- see "A New ITU, this column, Autocall May '93 -- provides for a WRC every two years beginning in 1993).

WRC-93 will recommend issues for the 1995 and 1997 Conferences. Among the issues that the FCC has identified for possible inclusion in '95 and/or '97 is high frequency broadcasting. We hope that the Radio Amateur community will be invited to participate in developing this issue in view of the long-standing problem of broadcast interference in the 7 MHz. band.

Another topic of interest to amateurs which may be on the agenda is wind profiler radars. A recent proposal by the FCC to allocate the frequency 449 MHz to wind profiler radar systems has elicited comments from the ARRL that the proposed allocations should be based only on careful coordination processes and site selection, to avoid interference to amateurs, who share the band 420-450 MHz on a secondary basis with government (military) radiolocation operations. (Ed: Frequencies from 400 to 1000 MHz have been proposed from time to time for wind profilers. A Recommendation adopted at

WARC-92 notes that the World Meteorological Organization, in 1989, requested advice and assistance from the ITU in identifying appropriate frequencies near 50 MHz, 400 MHz and 1,000 MHz to accommodate allocations and assignments for wind profiler radars. The matter is being studied by the CCIR. It remains to be seen what the international community will decide)

FCC NOMINATIONS

Westlink Report for July 15 says that: "Attorney Reed E. Hundt is expected to be nominated by President Clinton to become the next chairman of the Federal Communications Commission. Hundt, 45, is a well known Washington anti-trust litigator with the firm of Latham and Watkins. He is said to have little background in communications law, but an excellent understanding of the nation's future telecommunications needs. He has advised the Wireless Cable Association, Hughes Communications and individual cable operators in efforts to gain access to cable programming, and served on the presidential transition team. Hundt was also a classmate of Vice President Gore when both attended St. Albans' prep school in Washington. ... Hundt's position on matters involving hobby radio spectrum is unknown".

To be nominated to fill another vacant seat on the Commission is Regina M. Keeney. At age 37, Keeney is the Republican counsel to the Senate Commerce, Science and Transportation Committee. She is expected to fill the seat left vacant by Republican Sherrie Marshall. The normally five member Commission has been two members shy since Chairman Alfred Sikes and Commissioner Marshall resigned earlier this year.

Continued on next page

RADIATION HAZARDS

Earlier this year we noted (May '93) that the FCC proposes changing its guidelines for evaluating environmental RF radiation to reflect the guidelines adopted in 1992 by the American National Standards Institute (ANSI) and by the Institute of Electrical and Electronic Engineers Inc. (IEEE). The W5YI report on this action (June 15, '93) includes an interesting account of a joint study by the EPA and the FCC in 1990.

The study involved several amateur radio installations in Southern California. The objective was to obtain information on the potential impact of RF fields on ham operators and others who might be present in the immediate vicinity of the station "... where it is reasonable to assume that persons who might not have control or knowledge of their exposure could have access."

Nine amateur stations were selected which had a variety of antennas and transmitting equipment capable of operating on different frequencies. Stations ranged from simple to complex. Antennas used included Yagis, Quagies, inverted V's, horizontal dipoles, verticals, VHF discons ... and others. Primarily, HF and VHF frequencies were used for transmissions with operating power levels ranging from 100 watts or less to as much as 1,000 watts.

"Key down" measurements were made at one or two meters above ground at different distances from the antennas. Measurements were also made at various locations inside buildings and inside the ham shack at the operating position. An attempt was made to use high power levels in order to create worst case scenarios.

The results of the test showed that while some field strengths at HF can be relatively high, the potential hazard may be less than for lower field strengths measured at VHF where the highest specific absorption rates (SARs) occur in human beings. Ground level field strength readings at

HF were actually low. You had to get into the main beam path to obtain significant radiation levels.

It appears that vehicle-mounted amateur antennas which are closer to the ground create the greatest possibility for significant exposure in publicly accessible areas. There were several cases where the peak levels of RF exposure exceeded limits recommended for "uncontrolled" environments. It was also found that dipole antennas which are often strung just above a roof or yard presented high field strength readings. Generally, RF field strengths encountered inside ham shacks were well below IEEE recommended exposure limits.

The study concluded that "Precautionary measures should be sufficient to prevent exposure of the amateur operator and other persons to RF levels in excess of protection guidelines. Examples of such measures would be:

- using the minimum power necessary for a transmission;
- minimizing transmission time so that time-average exposures are acceptable;
- determining where high-field areas exist and restricting access to them during transmissions, and
- mounting antennas as high above ground as practical.



American Radio Relay League Report

By John Swafford - W4HU

This ARRL Report provides a brief summary of information published in the ARRL LETTER and other reports. The LETTER provides timely news of interest to active Radio Amateurs. Any League member may subscribe to the ARRL LETTER.

Amateurs Assist in Midwest Flood Efforts.

by Chuck Gysi, N2DUP

When flood waters engulfed the U.S. Midwest -- particularly Iowa -- earlier this month, Amateur Radio operators were ready to pitch in with support communications. The entire state of Iowa -- all 99 counties was declared a federal disaster area, as well as many counties in neighboring states.

As daily downpours pelted most of the Hawkeye State, already-swollen rivers were sent well over flood stage in many communities. The flooding along the Mississippi River attracted national media attention, as well as the problems that plagued the capital city of Des Moines after flood waters swamped and contaminated the city's water treatment plant. The problem eventually resulted in the loss of water for 250,000 residents for many weeks.

In fact, at one time Amateur Radio was the only link from inside Des Moines' The besieged water treatment plant and those on the outside, as hams relayed information from inside the submerged facility.

In most river communities, Amateur Radio wasn't necessarily pressed into service, because flooding didn't knock out communications circuits. While many towns and cities dealt with flooded downtown streets, business and homes, most telephones and governmental radio services remained in operation.

However, the magnitude of the flooding that resulted when the Raccoon River overflowed in Des Moines resulted in the placement of more than 100 Amateur Radio operators in various roles.

Chuck Willoughby, KA0VBA, is the ARRL district emergency coordinator for nine counties in Central Iowa. He said hams became involved to support governmental operations. The Greater Des Moines FM Club's repeater on 146.820 was placed into service as a link between emergency operating centers (EOCs) set up at various sites. Net control was set up at the county EOC at the Polk County engineer's office.

In addition, hams were stationed at EOCs set up by the city at East High School, by the state at the Hoover Building, and by the fire department at its dispatch center.

Two hams were stationed at both the city and state EOCs because the hams often were used to track down officials. While one ham remained on the air the other would pass messages to officials at the EOC. There were as many as 100 officials at the city EOC at times.

In addition to handling traffic over the 2-meter repeater, hams at the county EOC also manned the U.S. Army Corps of Engineers' radio at that location. The Corps was short on manpower and the hams pitched in on the Corps' frequency.

Continued on next page

One essential service performed by the hams during the flooding was to log river readings in the area. Chris Charron, WB0RSW, said he was one of those hams who radioed river level readings, particularly after a critical instrument failed on the Raccoon River near Van Meter, Iowa. Charron said he set up a generator at the location to light up the area where he was logging readings through the night.

Red Cross Assisted.

In addition to assisting governmental officials, Des Moines area hams also set up a net for the American Red Cross, to enable its mobile food units to have wide-area communications coverage throughout the metropolitan area. The Red Cross canteens fed not only flood victims, but also the thousands of volunteers who pitched in to sandbag endangered levees. Communications also was offered to the Salvation Army and National Guard, Willoughby said.

Hams who were trained by the Red Cross in damage assessment also were utilized in the Des Moines area. Two-person teams of hams would go into areas to start damage assessment and would radio in hourly to their headquarters while in areas without phone service. Willoughby noted that at times there were not enough volunteers for shifts, which were scheduled 24 hours in advance.

"We're pleased we were able to do as good a job," he said, adding "We managed to meet our target levels at all times."

Charron noted that the hams involved in the flood situation also were able to serve in a rumor control function, offering information on roads and bridges that were closed to those who inquired on amateur frequencies.

Looking back at the services provided by the hams, Willoughby observed that more mobile Amateur Radio equipment with cigarette lighter plugs and magnetic-mount antennas could have been used during the disaster operation. The lighter plugs allow mobile ham gear to be operated from any vehicle so equipped, as do the mag-mount antennas.

Safety is an important aspect of providing communications support during an emergency, and unfortunately there was one non-amateur, communications-related death during the flood operation.

Spc. Steven M. West, 30, of Ogden, Iowa, died after an antenna he was attempting to erect fell over and came in contact with a high-voltage power line. West was setting up equipment at Veterans Auditorium in Des Moines for communications with Iowa Army National Guard water trucks, which provided potable water for the city's residents at various locations throughout the city.

While Des Moines and the rest of the Midwest started cleaning up from the flooding, the hams who ride along the Des Moines Register's Annual Great Bicycle Ride Across Iowa (the RAGBRAI) prepared to be especially alert because of the weather problems.

The RAGBRAI, scheduled for late July, traverses the entire width of Iowa, where the thousands of riders start off on the western side of the state at the Missouri River and end on the eastern side by dipping their wheels into the Mississippi River.

Continued on next page

Charron, who works in information services for the Register, coordinates the dozens of hams who ride along each year as "bicycle mobile." Charron expected 30 or so hams to ride along with the 7,000 other riders again this year, but he noted that they would be diverted if they were needed elsewhere.

"If any of our people are of use anywhere else (because of the flood clean-up) we would gladly go there," Charron said.

Note: Chuck Gysi, 35, is news editor of The Hawk Eye in Burlington, Iowa. He is ARRL emergency coordinator for Des Moines County, Iowa, and an ARRL public information officer.

Highlights of 2nd 1993 ARRL Board Meeting.

The ARRL Board of Directors met in Windsor Locks, Connecticut, July 16-17. The following is a summary of the actions taken:

- o The Board adopted the recommendations of its Digital Committee, and, accordingly, will seek from the FCC regulations to permit semiautomatic digital operation below 30 MHz on frequencies authorized for data emissions, outside of the proposed new subbands for automatic operation. Bandwidth of digital transmissions of such operations would be limited to 500 Hz, and transmissions would be permitted only in response to stations under active operator control. Digital operators will be cautioned to strictly adhere to IARU band plans for digital operation.

ARRL will develop, through its Digital Committee, operating guidelines for semiautomatic operation.

- o The League will also petition the FCC to seek relief from regulatory restrictions on HF digital operations to further the amateur service's ability to contribute to the advancement of the radio art.

- o The Board affirmed its commitment to have the League serve as the club and military recreation station call sign administrator on behalf of the FCC on an unconditional basis.

- o The ARRL Friendship Award was created to encourage friendly contact between radio amateurs and the discovery of new friends through personal communication.

The League will publish a DXCC Yearbook to be distributed to active DXCC participants who are League members at no charge.

- o The League will petition the FCC to establish a lifetime operator license for the Amateur Radio Service.

- o A new Amateur Auxiliary Training Manual was approved by the Board, subject to the receipt of an updated memorandum of understanding between the ARRL and the FCC.

- o In response to a recommendation from the Industry Advisory Council, the Board stated its support for the concept of plug-to-plug compatibility between Amateur Radio equipment.

Continued on next page

o The Board accepted DXAC-recommended DXpedition operating practices and urged their widest practical distribution.

o The Board committed League support for the FCC efforts to implement electronic filing of license and upgrade applications. The General Counsel was directed to file comments opposing any attempt by any authority, other than FCC, to provide a point-of-examination temporary operating authority.

o The Board endorsed the concept of an international Amateur Radio permit, similar in nature to the international driver's license. It urged that the foundation be laid for the submission of a proposal to create such a permit to a future ITU conference.

o A new Spectrum Management Committee was created to address changes brought about by new technology.

o The Board affirmed its policy of seeking expansion of the 20-meter band from 14.350 to 14.400 MHz.

o Chris Anziano, KD1OX, was selected as the recipient of the Hiram Percy Maxim Memorial Award for 1992. James McCauley, AB6EU, won the Excellence in Recruiting Award.

o The Philip J. McGan Silver Antenna Award was awarded to Gary Pearce, KN4AQ. The award recognizes excellence in public relations.

o The Board bestowed the Technical Excellence Award for 1992 upon Kenneth Macleish, W7TX, for his article, "Why an Antenna Radiates," which appeared in the November 1992 issue of QST.

o James Stafford, W4QO, was picked as the Herb S. Brier Instructor of the Year. Robert Maurais, KC1IV, won honors as the Professional Teacher of the Year.

o The Headquarters staff was commended for its efforts in eliminating the DXCC backlog.

VEC'S Petition to FCC Seeks "Instant Operating" Rights.

A petition by the Western Carolina Amateur Radio Society (WCARS) VEC of Knoxville, Tennessee, asks the FCC to change its rules to allow amateur privileges to people awaiting their first license (and call sign) from the Commission.

The petition has been assigned RM-8288 by the FCC.

WCARS asks that anyone who holds a valid Certificate of Successful Completion (CSCE) for an amateur operator license issued within the previous 365 days be authorized the rights and privileges of the applicable license class before their call sign is issued and received from the FCC.

Continued on next page

The petition proposes a temporary call sign structure using the prefix WZ followed by numbers and letters determined from the CSCE-holder's name. WCARS cites a similar system having been used in the Citizens Radio Service as a precedent.

The petition says that the system by which upgraded privileges are immediately available to those already holding call signs has worked well, as well as noting that it now is possible to walk into a VE test session as an unlicensed person and walk out with an Amateur Extra Class CSCE (yet not be able to operate on the air for as much as two months).

Finally, the WCARS VEC says that instituting an "instant operating" rule would save the Commission time and money by eliminating telephone calls from "licensees in waiting."

The WCARS-VEC aired their proposal at the National Conference of VECs in June.

The idea is not a new one. In 1987 the FCC denied a similar petition, by Frederick G. Hambrecht, KJ4JE, which sought "instant operating" privileges for Novice licensees using call signs based on those of the administering volunteer examiners.

15 comments were filed in response to the Hambrecht petition, 11 in support and four opposed. Those opposed said that the waiting period was useful in allowing the newcomers to put their stations together, and others opposed the proposal on the grounds that the call sign scheme would be confusing and unwieldy.

The FCC, in denying the Hambrecht petition, said that while application processing times had been long (on the order of two months) when the petition was made, it had been reduced to a matter of weeks and was therefore not excessive.

The FCC also said that "it appeared" that the International Radio Regulations to which the U.S. is a signatory would not allow an "instant operating" arrangement.



AUTO-CALL Magazine

**P.O. Box 7612
Falls Church, VA 22040**

Subscription Rate is: \$8. per Year

Subscribe Today!

DX DX DX

By John Kanode - N3MM

ARRL BOARD OF DIRECTORS CREATES DXCC YEARBOOK AND ADDRESSES OTHER DXCC ISSUES

The DXCC YEARBOOK that was featured in August AUTOCALL was approved by the ARRL Board of Directors. I had the honor to make the motion that created this new annual ARRL publication. This was a WIN-WIN situation for everyone.

Also a modification of the DXCC structure was approved by the board. The new schedule is as follows: There is a \$10 fee for initial DXCC membership and certificate. The DXCC pin will be given as a courtesy, without charge to the member. Additional certificates and pins will be given as a courtesy without charge to the member. A fee for postage and handling will be charged for additional certificates and pins, which is set at \$5 at this time.

The board also voted to accept the DXAC Report on recommended DXpedition operating practices and urges its widest practical distribution. This report was requested several years ago by the ARRL EC as a result of the poor operating practices of a major DXpedition.

UPCOMING DXPEDITIONS

Liechtenstein	HB0/DL1ECU	September 1-11
Wake Island	KH9	August 29-Sept 10
Mellish Reef	VK9M	Sept 19-28
Yemen	4WIUA	Oct 15-29

UPCOMING DX CONTESTS

Panama Anniversary Contest	Sept4
Bulgarian DX Contest	Sept4-5
All Asian SSB DX Contest	Sept4-5
WAE SSB Contest	Sept11-12
Scandinavian CW Contest	Sept18-19
Scandinavian SSB Contest	Sept25-26
CQ WW RTTY Contest	Sept25-26

DXAC ACTIONS

The DXAC just recently voted on two pending requests. it voted 6 yes and 10 no on the question of adding band or additional mode-specific Honor Rolls to the DXCC program.

The DXAC voted unanimously against a proposal that would have changed the Countries List Criteria Point 2, Separation by Water. Under the failed proposal, distances would have been changed from 225 miles (2A) and 500 mile (29) separations to 100 miles.

Continued on next page

TIDBITS

Latest word on the Pratas Island DXpedition is it will start in early October.

The recent operations of JW0B and JW0KKI were pirates.

The following operations have been accredited by ARRL.

4S7/NE9Z	13 Jan 1993
6Y5/VE1AI	23 Mar 1993
8Q7AF	17 Mar 1993
AH1A	25 Jan 1993
D2SA	18 Mar 1993
S75S	28 Dec 1992
TU4EA	14 Apr 1993
T5HLL	15 Mar 1993
VP5/W2IQ	1 Jan 1993
XU7VK	1 Dec 1992
ZB2JL	8 Jan 1993

New Callsign structure for Bosnia-Herzegovina

T90aaa-zzz Repeaters and Digipeaters VHF/UHF

T91aaa-zzz Club Stations

T90a-T90z Class A amateurs

T92aaa-zzz Class E amateurs VHF FM only

T93aaa-zzz Class D amateurs VHF/UHF

T94aaa-zzz Class B amateurs

T95aaa-zzz Class C amateurs (similar to US Novices)

T96aaa-zzz Class F 80 Meter CW only

T97 T98 T99 Reserved for Class A only

The special prefix HL93 is being used from August to November 1993 for celebrating the Taejon International Exposition Korea 1993. During the EXPO a special call 6K93XPO will be used.

The Foundation For Amateur Radio, Inc.



Washington, DC

Elmer's Corner

By Paul Wilkins - AB4CY

The Ubiquitous Power Supply

Every piece of electronic equipment has one to provide the DC voltages required to energize the circuitry. They are generally the heaviest (and the hottest) parts of the whole package and provide a lot of maintenance headaches. Anything not battery powered is built to change the domestic 120V, 60Hz house current into the required DC voltage(s). The process starts with the "power transformer" that raises or lowers the AC line voltage to the proper level. Tube type equipment uses voltages of several hundred volts so they use step-up transformers to increase the AC voltage while transistor gear uses 6, 12, or 20 volts and requires a step-down transformer. The transformer, because of its magnetic field coupling between input and output, isolates the power supply from the power line. This is a nice wrinkle because 120VAC can hurt or kill you. That's why the warning label is on electrical equipment access panels.

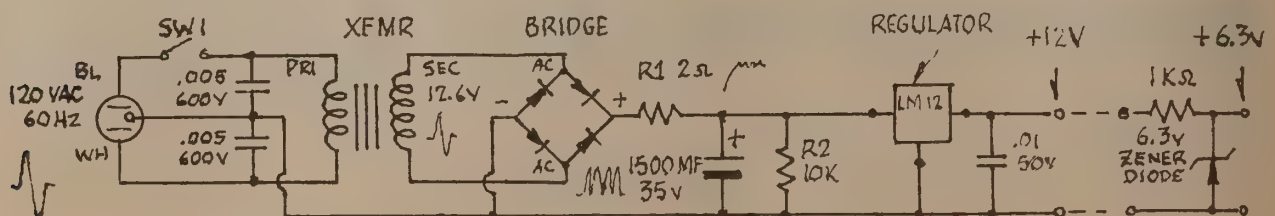
The bridge rectifier (four diodes) is more efficient than the half wave (one diode) or the full wave (two diodes). You buy the bridge as a module. The size depends a little on the maximum power (watts) the supply is expected to deliver. The pulsating DC output voltage from the rectifier is used to charge a capacitor which stores charge from the rectifier on voltage peaks and then supplies it to the output when the rectifier output voltage drops. In high voltage power (tube equipment) supplies capacitors of 8 to twenty microfarads are used. In solid state equipment the capacitance values run from hundreds to thousands of microfarads. This is because at low voltages the capacitor dielectric is much thinner making the capacitor much smaller. The high value capacitors are "electrolytic" and you must observe the polarity when connecting them into

the circuit. They are marked, usually with the negative terminal identified.

The rectified voltage output of a power supply will drop when current is drawn by an external circuit. This is because of the internal resistance of the transformer winding, the diodes, connectors, etc. If the voltage drops a significant amount, we say the supply has poor regulation. The regulation may be improved by using a three terminal voltage regulator chip. These come designed to produce a constant output voltage, provided their input voltage is always higher than the desired output voltage. These regulators work by dropping their input voltage to the desired output level like an automatic voltage divider.

At the bottom of the page is a schematic for a supply you can build for use around the shack. You can get the parts from a junk box, a supply house, or Radio Shack. The resistor R2 is called a "bleeder" resistor because its function is to bleed the charge from the capacitors when the power supply is turned off. This is especially important in high voltage supplies where good capacitors can retain a charge for many hours. The low value capacitors are there to bypass any hash generated by the line voltage or the action of the regulator. The resistor R1 may be used to limit the current flow into a large uncharged capacitor which might damage the bridge diodes with excessive current flow.

To obtain a lower regulated voltage from the power supply you can use a Zener diode (note the schematic symbol) and a current limiting resistor, R3. The Zener diode has a designed constant breakdown voltage that reduces the output voltage of the supply by "using-up" the excess voltage by dissipating it in the resistor.



FOUNDATION FOR AMATEUR RADIO

VOLUNTEER EXAMINER COOPERATIVE

NEW ADDRESS

JOHN FORREST WZ4A
6111 BURNETT ST.
ALEXANDRIA, VA, 22310
(703)971-3905

NEW ADDRESS

NOTICES:

- * EFFECTIVE JULY 1, 1993, NOVICE EXAMS MAY ONLY BE ADMINISTERED AT A VEC SESSION. THE PRIOR PROCEDURE OF ADMINISTRATION BY 2 GENERAL CLASS OR HIGHER AMATEURS HAS BEEN ABOLISHED.
- * EFFECTIVE JULY 1, 1993, THE NOVICE AND TECHNICIAN WRITTEN QUESTION POOLS (ELEMENTS 2 AND 3A) HAVE BEEN CHANGED. EXAMS ADMINISTERED AFTER THAT DATE MUST USE THE NEW QUESTION POOLS.

SCHEDULE OF EXAMINATIONS

1993

AUGUST 29, 1993 (SUNDAY)

SOUTHERN MARYLAND ARC HAMFEST (UPPER MARLBORO, MD)(ARRL VEC)
CONTACT: DWAYNE KINCAID WD9OYG (410)586-2177

AUGUST 31, 1993 (TUESDAY)

MARYLAND MOBILEERS ARC (LAUREL VEC) LIMITED WALK-IN
CONTACT: JERRY GAVIN NU3D (410)761-1423
ED CALHOUN W3DEQ (410)647-0370

SEPTEMBER 5, 1993 (SUNDAY)

D.C.M. ARC (LANDOVER, MD)(ARRL VEC) WALK-IN
CONTACT: FREDDIE BATTLE NG3G (202)546-9348 (DAY)(301)773-2898 (EVENING)

SEPTEMBER 11, 1993 (SATURDAY)

WILLIAMSBURG ARC (WILLIAMSBURG, VA)(ARRL VEC) WALK-IN
CONTACT: ANDREW SWANSON WJ4X (804)253-2811

ANNE ARUNDEL RADIO CLUB (DAVIDSONVILLE, MD)(LAUREL VEC)
WALK-IN CONTACT: NANCY ALLEY NT3Z (410)761-7115
BOB ISRAEL WC3I (301)262-5083

Continued on next page

SEPTEMBER 11, 1993 (SATURDAY)

RICHMOND, VA (W5YI VEC) PRE-REGISTRATION REQUESTED
CONTACT: DOW PIERCE (804)232-8128

MT. VERNON ARC (ALEXANDRIA, VA)(LAUREL VEC) WALK-IN
CONTACT: FRANK MACKEY N4GUS (703)455-1510

UNIVERSITY OF MARYLAND ARC (COLLEGE PARK, MD)(W5YI VEC) WALK-IN
CONTACT: SCOTT ROSENFELD NF3I (301)206-9921

SEPTEMBER 18, 1993 (SATURDAY)

LAUREL ARC (LAUREL, MD)(LAUREL VEC)
PRE-REGISTRATION DESIRABLE
CONTACT: JOHN CREEL WB3GXW (301)572-5124 AFTER 6 PM

SEPTEMBER 22, 1993 (WEDNESDAY)

MARYLAND MOBILEERS ARC (LAUREL VEC) LIMITED WALK-IN
CONTACT: JERRY GAVIN NU3D (410)761-1423
ED CALHOUN W3DEQ (410)647-0370

SEPTEMBER 24, 1993 (FRIDAY)

STAFFORD ARA (STAFFORD, VA)(ARRL VEC) WALK-IN
CONTACT: DAVID BOYD K9MX (703)659-6241
JIM McCLOUD N4LZJ (703)786-8012

SEPTEMBER 25, 1993 (SATURDAY)

WCARS (ROANOKE, VA) CALL FOR INFORMATION
CONTACT: FRED HORTON (703)366-6266

OCTOBER 2, 1993 (SATURDAY)

UNIVERSITY OF MARYLAND ARC (COLLEGE PARK, MD)(W5YI VEC) WALK-IN
CONTACT: SCOTT ROSENFELD NF3I (301)206-9921

OCTOBER 3, 1993 (SUNDAY)

D.C.M. ARC (LANDOVER, MD)(W5YI VEC) WALK-IN
CONTACT: FREDDIE BATTLE NG3G (202)546-9348 (DAY)
(301)773-2898 (EVENING)

Continued on next page

OCTOBER 3, 1993 (SUNDAY)

ARRL VA. STATE CONVENTION (VA. BEACH, VA)(ARRL VEC) WALK-IN
CONTACT: ED BRUMMER W4RTZ (804)890-8031

OCTOBER 9, 1993 (SATURDAY)

MASSANUTTEN ARA (HARRISONBURG, VA)(ARRL VEC) WALK-IN
CONTACT: MARSHALL COOPER N4ZKH (703)856-8012
BETWEEN 6-9 PM

MOUNTAIN ARC (CUMBERLAND, MD)(MOUNT ARC-VEC) WALK-IN
CONTACT: LEO PATTERSON KQ8E (304)289-3576
GAY REMBOLD W3DFW (301)724-0674

ANNE ARUNDEL RADIO CLUB (DAVIDSONVILLE, MD)(LAUREL VEC)
WALK-IN CONTACT: NANCY ALLEY NT3Z (410)761-7115
BOB ISRAEL WC3I (301)262-5083

RICHMOND, VA (ARRL VEC) PRE-REGISTRATION REQUESTED
CONTACT: RICK COOK AB4U (804)798-5048

MT. VERNON ARC (ALEXANDRIA, VA)(LAUREL VEC) WALK-IN
CONTACT: FRANK MACKEY N4GUS (703)455-1510

OCTOBER 16, 1993 (SATURDAY)

LAUREL ARC (LAUREL, MD)(LAUREL VEC)
PRE-REGISTRATION DESIRABLE
CONTACT: JOHN CREEL WB3GXW (301)572-5124 AFTER 6 PM

OCTOBER 21, 1993 (THURSDAY)

BALTIMORE ARC (TOWSON, MD)(ARRL VEC)
CONTACT: BOB KENNICK WB3HNV (410)426-8255

OCTOBER 25, 1993 (MONDAY)

ANTIETAM RADIO ASSN ARC (HAGERSTOWN, MD)(ARRL VEC)
PRE-REGISTRATION REQUESTED
CONTACT: PAGE PYNE WA3EOP (301)714-0688 (DAY)
BOB LAY (301)824-5132 (EVENING)

OCTOBER 26, 1993 (TUESDAY)

MARYLAND MOBILEERS ARC (LAUREL VEC) LIMITED WALK-IN
CONTACT: JERRY GAVIN NU3D (410)761-1423
ED CALHOUN W3DEQ (410)647-0370

Continued on next page

OCTOBER 30, 1993 (SATURDAY)

FREDERICKSBURG VE TEAM (FREDERICKSBURG, VA)(ARRL VEC)
WALK-IN CONTACT: KELLY SHAW AC4MB (703)891-5581
CAROLYN CAVANAGH AC4SK (703)373-7076

EXAM FEES:

- CHECK FOR APPROPRIATE EXAM FEE. FEES AND MODES OF PAYMENT FOR INDIVIDUAL VECs AND EXAM TEAMS MAY VARY.
- ARRL VEC EXAMS COST \$5.60
- LAUREL VEC EXAMS ARE FREE
- MOUNTAIN VEC EXAMS ARE FREE
- W5YI VEC EXAMS COST \$5.60

BRING TO EXAM:

- PICTURE IDENTIFICATION
- COMPLETED FCC FORM 610 (MOST VE TEAMS WILL SUPPLY AT EXAM)
- ORIGINAL AND A COPY OF CURRENT FCC AMATEUR RADIO LICENSE
- ORIGINALS AND COPIES OF ALL ACTIVE CERTIFICATES OF SUCCESSFUL COMPLETION OF PRIOR EXAMS
- EXAM FEE (CHECK OR CASH DEPENDING ON VE TEAM)

"GRANDFATHER" CREDIT FOR ELEMENT 3B (GENERAL WRITTEN):

- IF YOU PRESENTLY HOLD A TECHNICIAN CLASS LICENSE WHICH WAS FIRST ISSUED PRIOR TO MARCH 21, 1987, YOU MAY BE GRANDFATHERED FOR ELEMENT 3B (GENERAL CLASS WRITTEN EXAM) BY PRESENTING THE ORIGINAL AND A COPY OF THE LICENSE DATED PRIOR TO MARCH 21, 1987 TO THE VE TEAM. IT IS YOUR RESPONSIBILITY TO PROVE THAT YOU ARE ENTITLED TO GRANDFATHERING. DO NOT LOSE YOUR ORIGINAL LICENSE!

RULES FOR SUBMISSIONS TO THE FAR VOLUNTEER EXAMINER COOPERATIVE:

1. ALL SUBMISSIONS MUST BE IN WRITING
2. DATE AND DAY OF WEEK MUST BE SPECIFIED FOR EACH EXAM DATE
3. POINT OF CONTACT AND PHONE NUMBER MUST BE SPECIFIED
4. SPONSOR AND LOCATION MUST BE SPECIFIED
5. VEC MUST BE SPECIFIED
6. EXAM DATES UP TO 12 MONTHS IN ADVANCE WILL BE ACCEPTED

Training Classes

General Information

Alexandria Radio Club.....	Rich Adamy - KA4GFY.....	(703) 644-3920
Anne Arundel Radio Club.....	Tony Young - WA3YLO.....	(301) 262-1917
Arlington Amateur Radio Club.....	Fred Bardsley - WD4DHW.....	(703) 533-0372
Antietam Radio Association.....	Robert Long - KD3JK.....	(301) 824-5132
Baltimore Radio Amateur TV Society.....	Joe Chidester - W3SHZ.....	(410) 602-0353
Fauquier Amateur Radio Club.....	Neil Spokes - AB4YK.....	(703) 364-3861
Frederick Amateur Radio Club.....	Steve Bauman - W3FOA.....	(301) 662-4552
Herndon Repeater Group.....	Michael Weber - WB8RDN.....	(703) 450-2304
Laurel Amateur Radio Club.....	Pud Reaver - W3DQI.....	(301) 498-6293
MADRAS.....	Larry Ziecheck - N3GKS.....	(301) 984-6112
Maryland Mobileers ARC.....	John Baugus - N3JME.....	(301) 551-3161
Montgomery Amateur Radio Club.....	Jane Rosenthal - AA3CQ.....	(301) 762-6262
Mount Vernon Amateur Radio Club.....	John Forrest - WZ4A.....	(703) 971-3905
NASA/Goddard Amateur Radio Club.....	Vikki Gigante - KA3PVS.....	(301) 249-2609
Ole Virginia Hams ARC.....	John Fritsch - N4YOB.....	(703) 791-5995
Pentagon Amateur Radio Club.....	David Boyd - K9MX.....	(703) 659-6241
Rock Creek Amateur Radio Assn.....	Walt Ramsey - AK3B.....	(301) 949-3954
St. Mary's County ARA.....		(301) 862-2214
Shenandoah Valley ARC.....	Guy Black - W4PSJ.....	(703) 722-4952
Southern Maryland ARC.....	Vic Curtis - WA3YUV.....	(301) 888-1388
Southern Patuxent ARC.....	Dwayne Kincaid - WD8OYG.....	(301) 586-2177
Springfield Estates ARC.....	Will Schmitt - KD4CNX.....	(703) 768-5709
Stafford Adult Education.....	Jerry Mullinix - AC4HK.....	(703) 659-3905
Sterling Park Amateur Radio Club.....	Mark Johnson - WS3N.....	(703) 430-3804
Tri-County Amateur Radio Club.....	John Creel - WB3GXW.....	(301) 572-5124
Vienna Wireless Society.....	Paul Wilkins - AB4CY.....	(703) 560-2779
Woodbridge Wireless, Inc.....	Loyd Davis - K8EI.....	(703) 360-0248

FOUNDATION MEETING

The Foundation for Amateur Radio, Inc. meets at 8: p.m. on the second Wednesday of each month.

Visitors are always welcome

The next meeting will be Sept. 8 at the Lee Center, Alexandria, Virginia

Take Capitol Beltway to Exit 1 (US 1 North)

North to the second traffic light, Left on Gibbon Street to Fayette

Left on Fayette to dead end at Lee Center parking lot

Talk-in on 146.55

Roaring Thunder

On Wednesday, July 14th, at about 1:30 p.m., the National Weather Service (NWS) activated SKYWARN for two severe thunderstorm watches affecting the Washington Forecast office's county warning area of responsibility. The first severe thunderstorm developed over central Virginia and moved across Fredericksburg, Spotsylvania, Stafford, Charles and Calvert counties. SKYWARN amateur radio reports quickly verified the intensity of these storms including downed trees and power lines and heavy rain. The storm produced microbursts (small intense downbursts) with wind gusts of 50-70 mph. A damage investigation by NWS confirmed damage by a small tornado, called a gustnado, which occurs on the leading edge (gustfront) of a microburst. It produced a short path of damage in Stafford County, southeast of the town of Stafford, and caused minor damage to two homes and destroyed an R.V.

The second significant storm developed later in the day over northern Virginia and moved into Loudoun County. It was difficult to determine the intensity of this large storm due to the close proximity of the storm to the Sterling, VA doppler radar. SKYWARN amateur radio reports, used in combination with radar information, lead forecasters to issue a severe thunderstorm warning for Leesburg and Loudoun County. This storm also produced a microburst with wind gusts of 50-70 mph and a gustnado which struck downtown Leesburg near the courthouse and the jail. Numerous trees and power lines were downed by the storm. The net secured at approximately 9:45 p.m.

At 5:06 p.m. on July 26, 1993 the NWS activated SKYWARN for another strong and unpredictable line of thunderstorms which struck the northern and southern Shenandoah Valley. Reports of up to 2 inch diameter hail and extensive damage caused by strong winds came in through the SKYWARN Amateur Radio Net.

Thanks go out to all who participated in the nets and especially to off site net control stations N8ODZ, N0KEYZ, N0AA, N9EBJ and KC4YGB. Liaisons to the subnets were KD4ENQ, W3MMC, KD4IET, W4JZC, N3MYZ, NF3X, KD4BHV, WD4RPV, and N4VJK. The SKYWARN amateur radio station at the NWS was staffed by KD4DGQ, KD4DGO, KD4TWR, KC4YMP and KC4OCG. The Annapolis subnet was placed on a standby mode throughout the events. The NWS was most appreciative of the reports received over the net during these severe events which caused significant damage.

FCC ISSUES NEW RULES THAT IMPACT ON THE SKYWARN PROGRAM

On July 28, 1993, the Federal Communications Commission released its Report and Order making sweeping changes to, and generally permitting greater flexibility of operations under, Amateur Radio Rule 97.113. Paragraph 7 of section II (Discussion) of the Report and order, in part, clarifies the FCC's position on the permissibility of SKYWARN type operations. "Amendment of the rules ... will allow licensees to use amateur service frequencies, for example, ...to collect data for the National Weather Service, and to provide assistance voluntarily even where there are other authorized radio services available. We believe that this action will expand the benefits derived from the amateur service by the general public as well as amateur service licensees."

Continued on next page

Additionally, a change to 97.113(e) now permits the rebroadcast, by amateur stations, on a non regular basis, of " ... weather forecast information intended for use by the general public and originated from United States Government stations ... " In other words, it is now permissible to occasionally retransmit NOAA weather radio over repeaters. An excellent possibility exists for the notification of the amateur community of severe weather events, especially warnings, and often the activation of SKYWARN, through the connection of a tone alert activated weather radio to a repeater.

· Much thanks goes to the FCC and the ARRL for spending the time, effort and resources to institute these rule changes for the benefit of the amateur community and the community at large.

· SKYWARN TRAINING CLASSES

September 11, 1993 (Sat) SKYWARN Basics I 1-4 p.m. Sterling, VA
September 14, 1993 (Tues) SKYWARN Basics II 7-9:30 p.m. Sterling, VA
October 7, 1993 (Thurs) SKYWARN Basic I 7-10 p.m. Sterling, VA
Call (703) 260-0107 between 8 a.m. and 5 p.m. to preregister

Dan Gropper
KC4OCG

Training Courses

NOVICE/TECHNICIAN TRAINING CLASS

THE MOUNT VERNON AMATEUR RADIO CLUB WILL SPONSOR AN ENTRY LEVEL TRAINING COURSE LEADING TO THE NOVICE AND TECHNICIAN (NO CODE) AMATEUR RADIO LICENSES. THE COURSE WILL BE HELD IN ALEXANDRIA, VA ON MONDAY NIGHTS FROM 7:30 TO 9:30 PM BEGINNING SEPTEMBER 13, 1993 AND WILL RUN FOR ABOUT 14 WEEKS. THERE IS NO CHARGE FOR THE COURSE; HOWEVER, STUDENTS WILL BE EXPECTED TO PROVIDE STUDY MATERIALS COSTING ABOUT \$30. FOR INFORMATION AND LOCATION, CONTACT: JOHN FORREST, WZ4A AT (703)971-3905.

THE ALEXANDRIA RADIO CLUB WILL HOLD A NOVICE/TECHNICIAN TRAINING COURSE STARTING ON SEPTEMBER 21 AT THE ALEXANDRIA FIRE DEPARTMENT TRAINING FACILITY (LEE RECREATION CENTER) CONTACT RICH ADAMY AT (703) 644-3920 FOR MORE INFORMATION.

THE VIENNA WIRELESS SOCIETY WILL HOLD A NOVICE TRAINING CLASS BEGINNING: TUESDAY, SEPTEMBER 12, 1993 AND WILL RUN FOR 12 WEEKS UNTIL NOVEMBER 30, THE FINAL TUESDAY NIGHT. CLASSES ARE HELD AT THE VIENNA COMMUNITY CENTER AT PARK AND CHERRY STREETS IN VIENNA. CLASS HOURS ARE 7:30 UNTIL 9 PM. FOR DETAILS CALL PAUL WILKINS, AB4CY AT (703) 560-2779

THE MONTGOMERY AMATEUR RADIO CLUB IS OFFERING TRAINING CLASSES FOR NOVICE & TECHNICIAN LICENSES FROM SEPTEMBER 21 THROUGH NOVEMBER 11, 1993.

THE CLASSES WILL BE HELD ON TUESDAY AND THURSDAY EVENINGS FROM 7 PM TO 9 PM AT GAITHERSBURG HIGH SCHOOL, 314 S. FREDERICK AVE, GAITHERSBURG, MD. FOR INFORMATION CALL : JANE ROSENTHAL - AA3CQ AT 762-6264

MARYLAND EMERGENCY PHONE NET

Meetings: Nightly, 1800 Local, 3920 KHz
Directors: K3ONU, KD3JK, NF3X, WA3YLO (Alternate)
Manager: KK3F; Secretary: WA3YLO; Treasurer: KC3ZJ
FAR Representatives: KC3ZJ, WA3FYZ

The MEPN picnic happened on schedule, and WA3YLO/Tony reports the following: "On July 11, 20 members and friends gathered together at the Family Recreation Center in Davidsonville near Annapolis. As warm as that week was, a light breeze helped cool the large gazebo and several picnic tables under its roof. Everyone munched on boxed lunches, or cooked hamburgers and hot dogs on a nearby charcoal fireplace.

"After introductions all around, we discussed items of interest to net members, especially the following: the emergency operating agreements we've signed with other nets, and services we can provide. These will soon be sent to the Net directors, net control stations, and others who request them. In addition to this specific information, these agreements and net operating plans and procedures are tremendous training aids for both new and old net participants.

"Our need for liaison and net control stations continues, and a recruiting campaign is planned. The use of TWO METERS FM to help move traffic aroused interest. Special guests at the picnic were Pat Gormley, KK3F, our new net manager, and Bill Howard, WB3V, our new section manager, whose term began on 1 July." Thanks, Tony, for the input!

If you looked closely at the officer list above this column, you noticed that WA3YLO/Tony has succeeded N3EI/Jim as net secretary. We certainly thank Jim for his work during his tenure in office, and gladly welcome Tony to this onerous task. As they say, if you really want the job done, give it to a busy man! In addition, we belatedly congratulate Tony for being named the Atlantic Division HAM OF THE YEAR!

The F.A.R. FEST is right around the corner. Sept 12, at Gaithersburg, the MEPN will hold its annual meeting, arguably the biggest MEPN event of the year. Listen for the announcements, but you old-timers know we will meet in one of the closest cow barns to the main building. Plan to meet at noon, and put a face on some of our voices. Non-members of the MEPN are also more than welcome (hint..hint you MPTN, MDD, PA and DEL folks!)

Hope to meet you soon at Gaithersburg, and ... ON THE AIR.

73.....W3DQI/Pud

Chapter X



Society



of Wireless Pioneers

THE INTERNATIONAL ORGANIZATION
OF PROFESSIONAL RADIO TELEGRAPHERS

For Information Call
(703-536-9537)

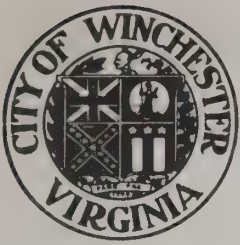


Romano & Mitchell

CHARTERED
CERTIFIED PUBLIC ACCOUNTANTS / MANAGEMENT CONSULTANTS

JOHN T. NUTTMANN, CPA

7910 WOODMONT AVENUE
SUITE 1110
BETHESDA, MD 20814
TEL (301) 652-5040
FAX (301) 907-8210



CITY OF WINCHESTER, VIRGINIA

June 24, 1993

Rouss City Hall
15 North Cameron Street
Winchester, VA 22601
703-667-1815
FAX: 703-722-3618
TDD: 703-722-0782

PROCLAMATION

WHEREAS, the City of Winchester has more than 100 licensed Amateur Radio operators who have demonstrated their value in public assistance by providing emergency radio communications, and

WHEREAS, these Amateur Radio operators donate these services free of charge to the City, in the interest of the citizens of the City as well as the world, and

WHEREAS, these Amateur Radio operators are on alert for any emergency, local or worldwide, and practice their skills during the American Radio Relay League, Inc.'s Field Day exercise, and

WHEREAS, this year's Amateur Radio Field Day will take place June 26-27, 1993;

NOW, THEREFORE, I, Gary Chrisman, Mayor of the City of Winchester, hereby proclaim the week of June 21-27, 1993 as

AMATEUR RADIO WEEK

in recognition of this important emergency preparedness exercise, and call upon all citizens to pay appropriate tribute to the Amateur Radio operators of our City.

A handwritten signature of Gary W. Chrisman in black ink, written over a horizontal line.

Gary W. Chrisman
Mayor

The Foundation For Amateur Radio, Inc. ®
Announces
The 36th Annual

F.A.R.FEST®



1993



SUNDAY, SEPTEMBER 12, 1993

**Montgomery County Agricultural Center (Fairgrounds)
Gaithersburg, Maryland
(Exit 11 off I-270)**

- *Tailgating*
- *Manufacturer's Reps*
- *Commercial*
- *Flea Markets*
- *Exams*

RESERVATIONS

All requests for
advance table and
space reservations
contact
Mary Morris
(703) 971-3905

GENERAL INFORMATION

All other information
contact
Dave Walter
(410) 544-4659

**GATES OPEN 6:00 AM
COMMERCIAL BUILDINGS OPEN 8:00 AM**

**General Admission:
\$5.00 Adults
Children under 12 Free**

TALK-IN: 146.955-

TailGate: \$12.00 (Standard Space and one General Admission ticket)

**W3PRL - SPECIAL EVENT STATION
"THE ONLY PLACE TO BE SEPTEMBER 12th"**

Directions To:

F.A.R.FEST '93

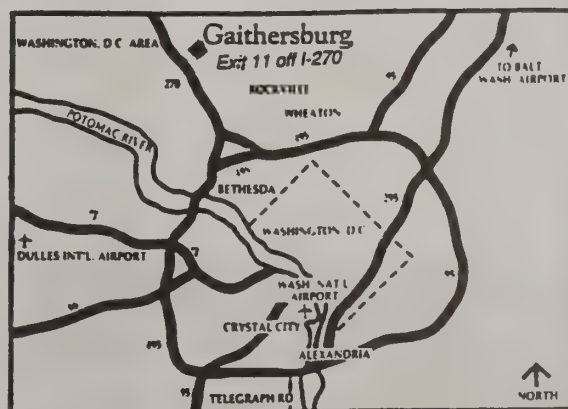
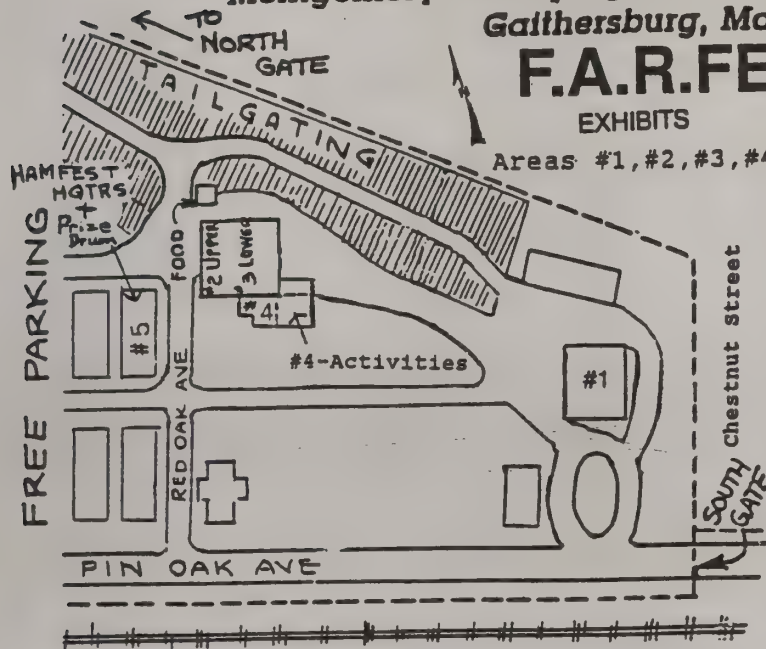
Montgomery County Agricultural Center (Fairgrounds)

Gaithersburg, Maryland

F.A.R.FEST

EXHIBITS

Areas #1, #2, #3, #4



FCC EXAMS

Novice through extra class Sunday September 12, 1993.
Registration at 8:30 AM.. Exams start at 9:00 AM..
Advanced registration requested. A limited number of
"walk-ins" will be accepted. Contact John Creel (301)
572-5124 after 6:00 P.M.
Send a completed form 610, photocopy current license
and SASE to:

LAUREL AMATEUR RADIO CLUB, INC.
P.O. BOX 3039
LAUREL, MD 20708-0039

TALK-IN

Starting at 6:00 Am Sunday the F.A.R.FEST site
talk-in station will be 146.955-. (Courtesy
Montgomery Amateur Radio Club).

ACTIVITIES

Part of area #4 is reserved for **Programs** .
Organized activities will begin at 11:00 Am and
continue into the afternoon. (Courtesy WAYLARC)

F.A.R.FEST Officials can be identified by blue staff shirts.

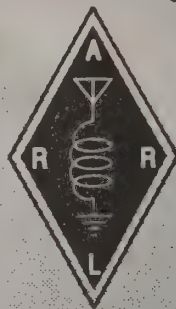
NOTICE

Information on the Foundation for Amateur Radio (FAR)
official publication Auto Call may be obtained by writing:
AUTO CALL
P.O. BOX 7612
FALLS CHURCH, VA 22046-1452



VIRGINIA BEACH HAMFEST

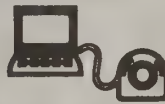
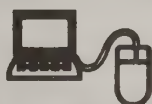
OCT 2 & 3 1993



Virginia Beach Pavilion  Virginia Beach, Va

ARRL VIRGINIA STATE CONVENTION

POP'COMM'S WORLDWIDE
SHORTWAVE LISTENERS CONFERENCE



AREA'S LARGEST COMPUTER EXHIBIT

COMMERICAL BOOTHS

Lewis Steingold W4BLO

3449 Dickens Drive
Virginia Beach, VA 23452
(804) 486-3800

TICKETS & TABLES

Manny Steiner K4DOR

3512 Olympia Lane
Virginia Beach, VA 23452
(804) 340-6105

Name _____ Phone _____ Fax _____

Business Name/Call Sign _____

Type of Business: Radio ___ Computer ___ Other _____

Address _____

_____ Advance Tickets good for both days ___ \$5.00 (At door--\$6.00) .. _____

Children under 12 free

_____ Commercial 10'x10' Booth for both days--\$125.00 per booth _____

Booth includes electricity

_____ Commercial 8' Table for both days--\$30.00 _____

_____ Commercial Tables (10 or more) for both days--\$20.00 per table .. _____

_____ Electrical Outlet for both days--\$15.00 _____

City

Ordinance

Prohibits

Smoking

in

Pavilion

ENCLOSE SELF-ADDRESSED, STAMPED ENVELOPE
FOR TICKETS AND REGISTRATION RETURN.

TOTAL _____

**** Tickets Required to Rent Commerical Tables or Tailgate Space. ****

Outdoor Tailgate \$15.00 (No Advance Registration)

Outdoor Tailgating -

a special area for "out of the back of your car" tailgating and good for both days.

Area consists of one lined off car space with car parked within space.

Washington Metropolitan Area IBM Amateur Radio Club

- Meetings: First Tuesday of the month that is a work day, 5:45 p.m. - 7:00 p.m.
- Next Meeting: Aug. 3rd at 5:45 p.m. Building 182, Room 3C51 (The Radio Shack) (301) 240-6877
- Chat Net: Second Wednesday of each month, 5:00 p.m. 145.520
- Packet: 145.610 MHz, running TCP/IP netcode (WA3YHE-1)
- Information: Erinn Tordella-N3HSA (301) 240-6200 The Radio Room (301) 240-6877

NEXT MEETING: September 7, 1993

While some of our more active members are on a 50% business travel duty cycle (e.g., Frank-WA3YHE) thus temporarily putting on hold the IBM Amateur Radio Association's installation of the Club's new Cushcraft R7 antenna, the ARA has been busy focusing on other areas of improvement.

In an effort to enhance the ARA's Emergency Communications capabilities, Chuck-W3GQY suggested that the Club acquire one or two gel-cell batteries as a backup power source. With the approval of the Club's Management Advisor, Chuck and Erinn-N3HSA plan to acquire a gel cell battery, complete with charger, at a reasonable purchase price via a contact W3GQY knows through the CARA (147.135 MHz) Repeater Association.

The ARA takes this opportunity to thank Chuck-W3GQY also for his successful efforts to update the roof access list in preparation for the antenna installation. Both Facilities Protection and Facilities Services have approved the addition of several officers to the current list.

Congratulations to Bryce Bolton-KD4RHP on his recent upgrade from Tech Plus to General Class Amateur Radio Operator! In honor of this occasion, Bryce has provided the following statistics documenting his use of the Shack during non-working hours:

- (75) QSOs 10 M USB
- (1) QSO 80 M CW
- (1) QSO 40 M CW
- (3) QSOs 2 M FM *

In addition, Bryce has 11 States confirmed and is gunning for the the Worked-All-States (WAS) Award. He is certainly off to a good start in the "Paper Chasing" game.

* Bryce is an IBM summer co-op from Virginia Polytechnical Institute supporting the FAA/AAS Program in Rockville. He is looking forward to purchasing VHF equipment in the future, but for now the ARA is pleased to be able to share Club resources.

After experiencing a hardware problem involving failure of a floppy disk drive, the 2-M packet station running TCP/IP netcode is back up on the air again. Currently, the ARA is looking into the possibility of becoming linked to Montgomery County RACES' packet station on 145.75 MHz. If the Club elects to take this approach, it would show further evidence of our purposeful commitment toward being able to provide a useful level of Emergency Communications services. Next month we hope to be able to elaborate further upon this topic--after we have had a chance to hold discussions with local RACES and/or TCP/IP contacts.

'73, Erinn-N3HSA

Orders and Inquiries
5-9 PM EST
(301) 963-7752

Help Line
8-9 PM EST
(301) 889-6436

PACKET GADGETS

"Connect with GADGETS!"

Ken Ramirez - KH2F
9404 Rushmore Ct
Gaithersburg, MD 20879

AEA • PacComm • DRSI

Montgomery Amateur Radio Club

- Meetings: 1st and 3rd Wednesdays of each month at 7:30 p.m. Executive Office Bldg. Montgomery Co. Government Center, 101 Monroe St., Rockville, MD. Park underground on G-2.
- Repeater: 146.355 in (Rockville & Germantown)/146.955 out (Rockville)
- Mailing: M.A.R.C., P.O. Box 611, Gaithersburg, Maryland 20884-0611
- Information: Jeff Horlick-KZ3F (301)258-0112; Steve Todd-K2IYQ (301)253-4172
- Training: Jane Rosenthal-AA3CQ (301) 762-6262; Dick Hayman-K3DML 340-8251

Ever mindful of AUTO-CALL editorial space constraints, the Montgomery Amateur Radio Club (M.A.R.C.) Reporter will recap Field Day '93 as well as touch upon what arguably might be considered to be the single most unique program presentation in M.A.R.C.'s 25 year history: Al Brogdon-K3KMO enthralled the Club 7/21 with a vivid, 1st-hand account of his 32-day, 10,500 mile "HF CW Motorcycle-Mobile" trek from Damascus, Maryland to Fairbanks, Alaska and back! (For details, see page 21, QST, 7/93.)

WARNING: If walking and chewing gum at the same time are problems, 35 w.p.m. cw at 75 m.p.h. may not be for you....



M.A.R.C. club banner on Comsat grounds in Clarksville, MD. Mr. Harvey Chalmers - N2FU is performing a soldering fix to the Comsat 20-meter beam antenna.

Over and above the efforts of Field Day Chairman (by default) Al-NW2M who somehow pulled it altogether in time, M.A.R.C. wishes to formally express its gratitude to COMSAT, in particular, Dr. John Evans-N3HBX, Lab Director, and the COMSAT Club president, Bob Marchese-NG3N for unlimited hospitality and the use of COMSAT's grounds and facilities for M.A.R.C. Field Day '93. Per Dave-WA3ZOR who supervised software logging activities, the Club earned 3,742 points in the "4A-MD" contest classification. In addition, M.A.R.C. set up a Novice/Tech 10-meter Station with Ron-N3KQY and Paul-KA3ORZ supervising; a satellite station (using 435 MHz uplink and 2 meter-downlink frequencies) with 25 watts out on Mode S and Mode B good for 9 contacts, including 2 on CW by Steve-K2IYQ; a solar station built by Ken-N3JBU and assisted by Rick-K3YNY, for 5 CW contacts and 100 points; a 2-meter packet station administered by Jeff-N3NPQ; and a 6-meter station set up by Harry-KC3MX. HF frequencies on both voice and CW included 80, 40, 20, and 15 meters, with operators (such as Matt-N3LFZ, Larry-N3BE, Jack-WU3N, Mark-NW3S, and Bryce-KD4RHP, N4SYK, NYSYL, N3LDI, and N3HSA) through the night. While racking up 200+ QSOs on 75 meters, Glenn-N3COB managed to hold the bugs off with his Garcia Vegas insect repellent, which doubled as a cigar.

Other contributors included: Chuck-WA3SOG for the use of his "pup tent on wheels; Ken-KD3VK for his multiple PC hardware donations; Harvey Chalmers-N2FU, who climbed the COMSAT 20 meter beam to perform soldering repairs; Rolan Clark-AA3G, who prefers that state-of-the art "bow and arrow" technique for putting up wire antennas; the excellent Field Day vittles were provided by Matt-N3LFZ and his Dad (Rich Walther) and were cooked scrumptiously by Pat-N3MIT and Tom-N3LGF; Howard-WA3VEZ, who treated the Club to decadent luxury in his "Airstream" RV;

Continued on page 33

Fauquier Amateur Radio Association

- Meetings: Second Tuesday of each month, 7:30 p.m. Local. Shadow Lawn Recreation Center, Warrenton, Virginia.
- Net: Every Wednesday night at 9:00 p.m. Local, 147.165 rpt.
- Packet: N4YXW-1 full service BBS in Warrenton, VA 145.090 MHz Chat Node: NET ROM compatible node :FARA 145.070 MHz
- Repeater: NZ4N/R 147.165 Mhz out; 147.765 Mhz in.
- Information: Neil-AB4YK. (703) 364-3861

Fauquier's hams are still riding the crest of a wave of exultation over our excellent Field Day results. We were delighted with our 5000 point FARA record on a 2A station. It was done this year with both excellent achievements and hard work. The CW and SSB HF stalwarts worked the bands around the clock and this year we had the luxury of towers with rotatable beams (arm-strong rotation power). The satellite contacts and the VHF station helped, not forgetting the solar power and the 14V battery strategy. Who knows whether next year, we may have power beam rotors? I can see it now, a few years from now, as some sophisticated young Fauquier ham looks back on our struggles and thinks "Boy! Did they have it tough back then?" He or she will have had beam teams and band captains and 10 transmitters, and a ton of moon bounce QSOs to add to the Pactor and Clover CW contacts and the 10 GHz contacts via the fabled PHASE 3D satellite communicator system all handily recorded on Amateur TV for posterity (for extra credit, of course).

Regardless of what the future may bring, I'm glad to report that we had a great time plus the Duffy (KD6RNE) cuisine and a lot of good camaraderie and some fine new experiences and some photos to put in the record books and last but not least some excellent weather (at least when I was at the mike or key).

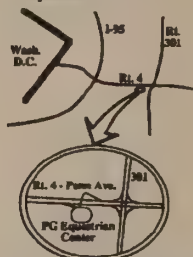
Continued on page 34

3rd Annual SOUTHERN PATUXENT HAMFEST

SUNDAY AUGUST 29 1993
at the Prince George Equestrian Center
Upper Marlboro, Maryland

ALL Outdoor Fleamarket and Tailgating

Just 7 Miles East from
Beltway Exit 11-A
Pennsylvania Ave. / Route 4



Vender and Tailgate Setup 7 a.m.
General Admission 8 a.m. - 2 p.m.

Rain or Shine

Advance Tickets \$4.00

At the Gate \$5.00

Tailgate Space \$5.00

(Tailgate includes one admission)

Talk-in on: 147.15 Repeater
(Courtesy Southern Maryland ARC)

Plenty of Parking

ARRL
Approved



For Advance Registration or More Information...
Mail to: Southern Patuxent ARC
1445-H Parlan Road
St. Leonard, MD 20686
(410) 586-2177



MARC - Continued from page 32

Eric-WA3ZEO, whose air conditioned van resembled the Ritz Carlton to bleary-eyed operators; finally, Reporter Ron Agnir from the Damascus Courier Gazette published M.A.R.C. Field Day photos in 5 local editions.

PUBLIC SERVICE NEWS FLASH: Under the leadership of Hank-N3ESR, M.A.R.C. once again provided health and welfare radio communications for the Rockville 8K Twilight run, thanks to the efforts of the following volunteers: Rob-N3HQX (Net Control Op), Bill-NG3K, Bill-W3WON, Bob-NK3I, Jim-N3CLL, Jeff-KZ3F, Rip-KC3H, Arley-WB9GPO, Frank-N3OQB, Ross-K3USO, Frances-KA9ORU, Irv-N3LDY, Tom-KA3GYI, Charlie-WA3HNN, Jay-KA3ZMW, Allan-N3JKV, Gene-AD3F, Ralph-WB0JKV, Al-N3LOL, Bob-N3LDI, Dave-WA3ZOR, Harry-KC3MX, Andy-WA3LTJ, Tom-N3LGF, and Erinn-N3HSA.

As ever, be sure to stay "clear and listening" on 146.955 MHz.

Erinn-N3HSA

Tri-County Amateur Radio Club

- Meetings: Semi-annual business meetings, time and date announced on the air and in the club newsletter.
- Repeater: KA3LAO/R, 147.780 MHz in; 147.180 MHz out.
- On-the-air: Tuesdays at 1930 hours (Local time). Amateur Radio Newsline Tuesdays at 1915 hours (Local time).
- Mailing: P.O. Box 10592, Silver Spring, MD 20914

It is hard to believe that the summer is now behind us. Certainly we are not out of the hot weather yet but the ringing of the school bells generally announces the end of summer. The club has had a number of social events over the summer which were quite enjoyable. The latest one was on Saturday, July 17, when the club had a picnic at Greenbelt Lake. A number of families attended which made it a great opportunity to get to know one another. The location was fairly secluded in the trees and had everything we needed. Even the weather cooperated. After some of the hottest days on record, the day of the picnic was perfect. Since everyone brought the things as planned there was more than enough food for everyone. Even Ron - N3EFC was pressed into duty as the chief cook. You don't know what you missed if you weren't able to attend. Special thanks go to Paul - N3GII, Dave - WB3KXL, and Mike - KA3OFR for their fine planning efforts which made this event a success.

Don't forget to mark your calendar for Saturday and Sunday, September 18 and 19 for the College Park Air Fair and Show, held at of all places, the College Park Air Park. As many volunteers as possible are needed to help. This is a great opportunity to not only enjoy the show but to be of help. For current taped information call 301-776-4558 and at the prompt press "718". If you missed the picnic in July this would be a good opportunity to meet some of the other members.

You will also want to mark your calendar for Sunday, November 28, 1993, which is the planned date for the Tri-County WinterFest '93 hamfest.

It will be held in an even better location than last year. Look for more information next month. Tri-County members should check into the Tuesday net for more information and to volunteer for a committee. There are jobs for everyone who would like to help, irrespective of the amount of time you have available. All are welcome to assist with the hamfest.

Heard On The Repeater: This feature of our report attempts to provide useful suggestions for efficient and effective use of the repeater:

There has been a great deal of conversation concerning the intended relaxation of the phone patch rules by the FCC. As of this time it has not happened. Users of the patch should refrain from questionable calls over the air until it is official.

Don't forget the Tri-County on-the-air net which meets each Tuesday at 1930 local. If you are listening at 1915 you will hear the latest NewsLine information, ARRL bulletins, ARRL propagation forecasts, and the latest exam schedules throughout the area. NewsLine is an amateur radio news service from California which always has information of interest to the amateur community.

Greg - WA3FSC

Fauquier - Continued from page 33

On July 31, 10 Fauquier hams (and one future ham) met for breakfast at Bobs' Big Boy in Warrenton for an enjoyable eyeball social occasion. It was very successful and will no doubt be repeated again in the near future. One well received suggestion was that it be a monthly occasion not immediately preceding the club meeting. Bets are on 28 August.

See you at the next breakfast or club meeting (September 14).

73 Neil, AB4YK.

Southern Maryland Amateur Radio Club

- Meetings: 2nd Friday of each month at 7:30 p.m. Church of the Nativity, 5203 Manchester Dr., Temple Hills, Maryland.
- Nets: Tuesdays at 8:00 p.m. on 147.75/15 Repeater Thursdays at 8:00 p.m. on 28.447 USB
- Packet: WA3TAI full service PBBS in Ack-o-keek, MD 145.03 & 446.075, SMD (WA3TAI-5) NET/ROM Node in Ack-o-keek, MD 145.03
- Repeater: W3PT/R 147.75/15, Cheltenham, MD. Autopatch to 911
- Mailing: P.O. Box 273, Cheltenham, MD 20623
- Information: Vic & Linda Curtis, WA3YUV & KA3VNI (301) 888-1388

Summer months find many hams on vacation but SMARC managed to get a work party up to the repeater site during the month of July. Work was done to the antenna and feedline connections. I noticed a coverage improvement on my way into town from a western vacation. I actually made it into the machine from Gainesville, Va. Other hams have commented on better handheld coverage in the Waldorf area.

Our annual special event station at the St. Clements Island blessing of the fleet will probably be cancelled. There is a possibility that the entire event is cancelled so SMARC is unable to plan for the station.

The SMARC Novice/Tech class starts on Monday, September 20 at 7PM. The class is held at the Church of the Nativity on Manchester Dr. just outside the beltway at route 5 (Branch Ave.)

For information call Vic Curtis 301-888-1388 or Ray Simpson 301-894-0606.

SMARC will provide communications for the American Heart Association walk/run on Sunday, October 3. The walk starts at 8:30 AM at the food court parking area of St. Charles Mall. Ham operators will be needed from 8AM until Noon. Please call Allen Stevenson 301-856-3561 or Ric Creager 301-868-6895 to volunteer.

73, Ric Creager - KK4GV

Maryland Mobileers Amateur Radio Club

- Meetings: The first Friday of every month at 7:30 p.m. The location is the Office of Emergency Management at Crownsville State Hospital. Talk in available on 146.805 Mhz or 449.125 Mhz.
- Repeaters: WA3PJQ 146.805 and 449.125 Mhz
- Weekly Net: Mondays on 146.805 at 8:30 p.m.
- Address: M.M.A.R.C. P.O. Box 935 Severn, Md. 21144-0935
- Information: (410) 768-5967

September Meeting... Propagation (that's the funny stuff antennas do to the air around them)... WV1B will provide a stimulating and exciting talk on the how and why antennas do what they do.

Hope to see you at the meetings. Talk in is available and we like having company stop by, so don't be shy.

73's, Bruce-N3BWF

2 Land Communications, Inc.

Specializing in VHF-UHF Amateur Communications.

**Box 559 JFK Facility
Jamaica, NY 11430
718/322-4660**

HT's - Mobile Rigs - Accessories - Power Supplies
Power Meters - TNC's - Mobile & Base Antennas
Books - Videos - Study Materials - Practice
Oscillators - Keys - Paddles & Keyers for CW buffs.

ARRL - ARTSCI Modification Books - CQ Videos
Gordon West - NARA - Radio Amateur Callbook
W5YI - Diamond - Comet - Larsen - Kantronics
AEA - MFJ - Nye Viking - Bencher - Anli

We have a **LARGE** selection of these items in stock and we ship via UPS & USPS. We also look forward to seeing you at most hamfests in the Autocall subscription area.

TNX es 73 de Kevin, N2KXX - Pres.

Rock Creek Amateur Radio Association

- Meetings: 3rd Friday of each month at 7:30 PM. VITRO Corp. Bldg #4, 13900 Connecticut Ave., Silver Spring, MD
- Repeater: W3RCN, 145.25/144.65 in Rockville, MD.
- Weekly Net: Monday at 8 PM on the repeater
- Alumni Net: Monday at 10:45 AM on 7.230 MHz (+/- QRM)
- Luncheon: Each Wednesday at 11:00 AM at the Anchor Inn in Wheaton, MD
- Address: P.O. Box 1913, Silver Spring, MD 20915
- Information: Walt Ramsey - AK3B (301) 949-3954, Leo Boberschmidt - KA3TGY (301) 946-3738 or KA3TGY@N3BBF.MD.USA.NA

A very special "Thank You" to Ken Williams-KD3BT, the RCARA Treasurer for so many years. Mike Salapka-NQ3V, the new Treasurer, said that the very high quality of the books and records made it much easier for him to take over this job. [Note to other clubs: DON'T forget to thank those who hold your club offices, especially those who have held them for a number of years].

Thanks to Rick Rabineau-N3NRL and five other ham friends from Burtonsville, Ira Tice-N3JOQ, a Handi-Ham member of RCARA, now has a larger antenna farm, particularly of the VHF/UHF variety, although HF is represented by a new R-7 vertical. The crew put up 6-meter, 2-meter, and 70 cm Ringos and the R-7, with a 6-element, 70 cm and a 5-element, 1.2 GHz still to go. Sounds like Ira has his whole house surrounded in aluminum. Ira has also become interested in ATV and added TV equipment to his shack. If you might be interested in amateur television, give Ira a call on the 145.25 RCARA repeater just about anytime during the day or evening.

Ed Buchheit-KA3RWX and his wife Mary-KA3THQ, RCARA members who now live in Fairfield PA, had a baby boy on June 15th. Joseph Edward and his proud parents are all doing well. Their daughter Theresa, age 3 in October, has

become quite good at 2-meter communications (third party, of course). Ed!!!! Have you started a ham radio equipment fund for the kids yet? [Mary and Leo-KA3TGY received their ham tickets on the same day (18 June 1988): Mary was Leo's 2nd contact and Leo was Mary's 1st contact on 10 SSB - a whopping "DX" distance of two backyards and one street!!].

73, Leo-KA3TGY@N3BBF

Capital City Amateur Radio Society

- Meetings: 3rd Saturday of the month at 12 Noon (except July & August). Woodridge Public Library, 18th & Rhode Island Ave. NE, Washington, DC
- Repeater: 145.11/144.51 Mhz in NE Washington, DC. Auto-patch membership available.
- Weekly Nets: Computer Net: Monday at 8 PM on the repeater Packet Net: Tuesday at 8 PM on 145.53 MHz On-Air Meeting: Wednesday at 8 PM on the repeater RTTY Net: Thursday at 9 PM on the repeater (All amateurs are welcome to join in on any of these nets).
- Information: Chester R. Martin, W3EIL, (202) 529-9598 - 1719 Franklin St. NE, Washington, DC 20018 / Leo J. Boberschmidt, KA3TGY KA3TGY@N3BBF.MD.USA.NA
- Training: Plater Campbell, N3DZQ, (202) 544-7810

On July 17, 1993, CCARS once again assisted the Greater Washington Soap Box Derby. CCARS has been involved with the annual derby for many, many years. The derby was held on the Constitution Avenue hill near the Capitol for the third year. CCARS provided a generator to power the finish-line timing equipment and also provided communications support during the various races. From early setup before 7AM till after the final heats around 9PM, CCARS had members stationed at the starting line, the finish line, and the run-out area.

Continued on next page

Alexandria Radio Club

- Meetings: Second Friday of each month at 8:00 pm, Alexandria Red Cross building, 401 Duke St, Alexandria, Virginia.
- Net: Every Thursday 8:00 pm local time 147.315 and 444.60 rpters.
- Repeaters: 53.13-, 147.315 +, 224.82-, 444.60 +, 919.60-, 1282.60-
- Information: Jeanne Rexroad-N4ZGI (703) 971-0384

The Alexandria Radio Club has been busy the last few months. The May meeting was an excellent program by Gerri, N4GHI, and John, N6ANQ, Sweeny on traffic handling. They explained how a message makes its way from the originating station to its destination. When was the last time you handled a piece of traffic? It's good practice and amazes your non-ham friends.

June means the Waterfront Festival the second weekend. The Alexandria Radio Club was there with a demo station explaining the benefits of ham radio to curious passers by. We even generated interest for the radio class we are sponsoring in September.

Field Day was a good time had by all and even a little bit of operating. The cuisine and accommodations were both five stars. Time will tell how the score compares with other groups in our category.

We are getting ready to teach our first radio class in several years. The place will be the Fire Department Training Center on Tuesday evenings at 7:30 pm starting September 21. If you know of anyone looking to learn about ham radio and even become one, send them down, or even better, bring them yourself. We would like to meet you too!

Rich KA4GFY

CCARS - Continued from page 36

The races lasted a fair bit longer this year since the derby was being run under a double-elimination system that required a racer to lose twice before being dropped from further competition. The young winners go on to the nationals in Akron, Ohio. Communications between the start line and the run-out area are particularly important to ensure that racers do not leave the starting line until the run-out area is clear. The following CCARS members participated in the event: Steve-W3ETX, Cy-N3EPH, Bob-KA3GER, Ernie-WW3W, Gus-N3KTM, Pete-N3CUY (the club's expert video taper), Shep-WB3KIC, Juanita-N3NQC, Ham-N3DTZ, Brad-W3OXY, and Sharyn-KA3DOF. One of the stations used a plumber's delight, copper J-pole antenna that had been built at a club meeting as a demonstration project. The J-pole is a VERY effective antenna for this type of activity and also proved to be quite an attention grabber for the general public. [NEVER overlook an opportunity to promote ham radio].

Chester-W3EIL, Joe-K3UAL, and Elmer-K4EUX and their wives attended the OMIK National Convention in San Diego in July. Although not as many club members attended this year, the group that could go had a great time renewing friendships with the other OMIK hams. OMIK members from all over the U.S. were present and there was even one member from Liberia.

CONGRATULATIONS: The club would like to congratulate Harold Lawrence-KA3MUB on his upgrade from Novice to Technician. Way to go Harold.

CCARS DXers: Although band conditions have not been the greatest lately, the club's DX contingent has been busy chasing that sometimes elusive DX. Sharyn-KA3DOF is currently the club's leading DXer with 266 countries worked and 258 confirmed. Other member totals (worked/confirmed) include: Leo-KA3TGY 239/220; Cy-N3EPH 201/182 (all on 10 meters); Joe-K3UAL 95/89, and Shep-WB3KIC 88/63.

73, Leo-KA3TGY@N3BBF

Herndon Repeater Group

- Meetings: On-the-air meetings every Monday at 9:00 p.m.
- Repeater: N4FSC/R 144.71/145.31 MHz
- Packet BBS: 145.03 MHz (BBSHRG)
- Mailing: Herndon Repeater Group, P.O. Box 5073, Herndon, VA 22070
- Training: Michael Weber-WB8RDN (703) 450-2304
- Information: Michael Rosati-N4FXP (703) 481-8380

TRAINING: The third annual HRG Novice/Technician Course will be held from September 11 - November 20 on Saturday mornings in Herndon. The course is free and seats are available. Contact Mike WB8RDN at the number listed above or Tom WBEZRP at 777-5235 for additional details.

FIELD DAY: HRG participated in Field Day again this year in the 4A Solar Battery/QRP category. The final score was 901 contacts for 8290 total points and scored 1400 bonus points. The breakdown was as follows: 413 CW, 430 Phone contacts, 33 Satellite contacts, 9 Novice/Tech. station contacts, and 16 Packet QSO's. Thanks to all who assisted HRG FD Chairman Bill N4WJN with this effort: Don KD4CHU, John KI4R0, Nick KD6ADY, Rick WN3T, Steve KA1LM, Terry AB4UM, Norm KD4LTH, Mark KD4TAJ, Mike KD4MTW, Gary KD4SRX, David KD4YIJ, Arnold KD4GSQ as well as many others.

EXAMS: HRG will sponsor two more ARRL/VEC exam sessions during 1993: August 28 and November 20. Contact Mike WB8RDN for details.

TECHNICAL SEMINAR: HRG will sponsor two Technical Seminars in the coming months, first on Sept.26 hosted by Chris WA1ZXX on Radio Controlled Aircraft using Amateur Radio and finally on Nov.21 hosted by Louis N4KWP on Covert Hamming from within a Homeowners As-

sociation. Tune into the Monday evening HRG Net at 9PM for additional details. HRG holds a Technical Seminar every other month on a Sunday afternoon at the Eastern Loudoun Regional Library in the Cascades section of Sterling.

NEW MEMBERS: HRG welcomes the following new members: Terry KD4GSW, Steve KB4WKK, Charlie KD4TDY, Dick KQ4AK, Woody KC6NOT, Nancy KD6VRK.

NET MANAGER: HRG welcomes Terry AB4UM as its new Net Manager, assisted by Bill N4YNI. Some minor changes have been made to the Net in an effort to accommodate the 30+ check-ins in a shorter amount of time. The Net meets Monday at 9PM on the 145.31 Mhz. repeater. Thanks to recent Net Control Stations KD4GSR, KD4ITK, KD4ITN.

73 Mike WB8RDN



Gary KD4SRX makes the final adjustments to one of the HRG Field Day antennas.

Southern Patuxent Amateur Radio Club

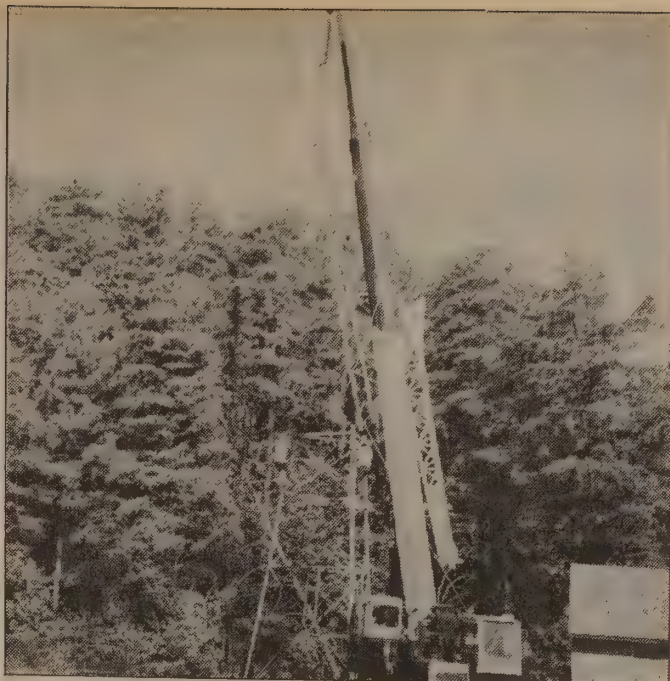
- Meetings: 2nd Wednesday of each month at 7:00 p.m., Southern Community Center, Lusby MD
- Nets: 28.410 Thursdays 8:30 p.m. 147.195 Tuesdays 8:30 p.m.
- Repeaters: W3ZNW 146.985- Sunderland N3JTG 147.195 + Leonardtown KA3ZYG 449.225- Leonardtown N3AGB 443.30 + St. Leonard, Autopatch for members
- Address: PO Box 399, St. Leonard, MD 20685
- Information: Nick Gravelle 301-872-9041, Dwayne Kincaid 410-586-2177

The first Fox Hunt of the year for SPARC members was over in just 4 minutes last month. The two watt transmitter on 147.57 Mhz was found by Glenn Thorn / N3PNL at a local park in St. Mary's county. Glenn has vowed to make it a little more challenging for the August Fox Hunt that will take place on the 14th. The schedule for the rest of the year will be each Saturday following the SPARC monthly meeting.

The 146.985 repeater was finally brought back on the air in late July. The repeater controller was damaged by lightning over a month ago and had to be returned to the factory for service. The repaired repeater comes just in time for the August RACES exercise held by Woody / W3ZNW in Calvert County.

The 100 foot, free standing tower was finally completed at the Hollywood Volunteer Fire Department in July. About 15 SPARC members were on hand to finish the installation that only took about an hour. The remote receiver antenna for the 147.195 was later installed by Gene Talley / N3JTO and Gary Coombs / N3JTG atop the tower (see photos)

As a result of the new SPARC tower and remote receiver, a new net will be started on the 147.195 repeater. The net time will be 8:30 local time on Tuesdays.



The 100 foot free standing tower at the Hollywood Volunteer Fire Department.



Gene - N3JTO and Gary - N3JTG atop the tower installing the remote receiver antenna for the 147.195 repeater.

Northern Virginia FM Association, Inc.

- Meetings: 3 times per year (fall, spring, winter)
- Weekly Nets: NVFMA Net: Every Wed., 8:00 PM local, 146.79 - ARES/Public Service Net, Every Sun., 9:00 p.m. local, 146.91 - On Air Equipment Clinic, First Wed. 7:30 p.m. local, 146.79
- Repeaters: 2-Meter: 146.79- (W4LBL-FFX City) & 146.91- (W4XG-Tysons Corner) - 6-Meter: 53.37 MHz KM4OI Repeater - 440 Mhz: 444.75 + (K4JYF-Tysons Corner) - 220 Mhz: 224.10 (WB4YHD-FFX City & X-linked to 146.79) - 224.34- (KB4CVL-Tysons Corner) - 1292.1 MHz out / 1272.1 MHz in (K6LEW-Tysons Corner)
- Membership Info: Norm Rosenthal-KB4VLP (703) 425-7108 or Dan-KC4OCG (703) 281-2358 or Norm-KB4VLP 703-912-5891.
- Mailing Address: NVFMA, P.O. BOX 486, McLean VA 22101

On July 26, 1993 the NVFMA hosted a TMARC meeting in Tysons Corner which was well attended and provided a significant insight into the technical and procedural methodology to be followed to achieve coordination in the crowded amateur bands.

Plans are underway for more technical improvements to the repeaters for the Fall. More details to follow!

Dan KC4OCG.

**Don't Forget
September 12, 1993**



Metrovision Amateur TV Club Fast Scan-Color-ATV

- Meetings: Quarterly: Call for next meeting time and place Repeater: WA9GVK/4 (video and audio) 425-431 MHz in; 438-444 MHz out. Also accessible on 144.970 simplex audio.
- On-the-air: Sundays(ATVNet)at 8:00 P.M. Wednesdays (Ragchew) at 8:00 P.M.
- Mailing: Metrovision, Inc., P.O. Box 8231, Falls Church, Va., 22041
- Information: Sam - N3GHY (301) 630-3373 Dick - WB3EPX (301) 439-8135

As many of you already know, our fiend and club member KC3VO-Bob Curry was involved in an auto and motorcycle accident several weeks ago. Well, I am happy to report that Bob has survived the ordeal quite well. He certainly had a good excuse for buying a new Honda.

The Metrovision annual picnic for this year will be held at the QTH of KA4CKI-Jim down in Woodbridge, Virginia on Labor Day, September 6. We will have the details of that event in a future Auto-Call article.

Metrovision plans to have a Twentieth anniversary dinner probably sometime in late November or early December. The time and place have not yet been decided, but we will let you know these details as soon as we make a decision. We will be hoping for a good turn out for this event as it does mark a milestone in Metrovision's history.

I hope that have had the opportunity to see the new ATV WA9GVK repeater ID'er. It is very colorful and much nicer than our previous one.

That's all folks. See you on ATV.

73 Dick-WB3EPX

Culpeper Amateur Radio Association

- Meetings: Third Monday of each month, 7:30 p.m., Culpeper County Courthouse Supr. meeting room, Culpeper, VA
- Repeaters: Voice AA4VI 147.12
- Packet Node 145.79 (IPEPER) Packet BBS 145.79 (CULBBS)
- Nets: Tues. and Thurs. 8 p.m. 147.12
- Information: Gary, W0QDP (703)-854-6187

Members of C.A.R.A. this year held their Field-Day exercise at Mountain Run Lake Park, located just west of Culpeper, VA. Stations in both HF and VHF categories were operational with many of the club members doing their share of the operating. The location is very scenic with available shelter and a very pretty view over the lake.

Sunday, July 18 found the following club members, KD4LIB, KB4UZK, WD4LHP, W4KXS, KC4QFG, W4RXT and WD4OKD (using two metersimplex) providing emergency communications during a "Biathlon" sponsored by the American Cancer Society. The race was held at the site of our Field Day, Mountain Run Lake Park and the immediate area surrounding the lake. The seven mobile stations were placed at critical points on the course. Fortunately, there were no serious injuries or emergencies with the 70 participants or spectators.

On Friday June 11, Bill Brown, AC4KP, with his group of VE's held an examination session at the Piedmont Vocational School located south of Culpeper on Rte. 15. Eleven hopefuls took various sections of the exams with 9 passing their tests. Congrats to club member Ed Stalder, KC4YY on upgrading to "Extra." Next exam session for Bill and his group will be December 10, 1993.

Bill, who has been doing a lot of "Brass-Pounding" with the daily CV Sunrise Net on 7.148 Mhz. recently attended the Hamfest held in Asheville, N.C. There he met many of the members of the net which he had never seen. This is a very friendly morning net with KC4PTU, K4HXM, N4TMG, and AB4HT taking turns at NCS. Bill said that it

was a place of many activities in addition to the Hamfest and he had a great time.

A committee has been appointed to plan our annual picnic which will be either late September or early October. Details will be forthcoming at our August meeting.

Several club members made it to the Berryville Hamfest, it was good to see old friends again and look for a few bargains. Ellis KB4RVM came home very happy with a new 2 meter mobile and a HT to boot.

Plans are being formulated for the S.E.T. which will be coming up in October. If you are not registered with ARES please see WD4OKD at the August meeting. This is one phase of Amateur Radio where we really can be of service to our community.

Our Packet facilities have had a rough time of it lately. Lightning has zapped the "IPEPER" node a couple of times but as of press time the node and the KD4PWU BBS are operational.

73 Bud WD4OKD

Send all Club Columns and Articles to:

Doug Allen - Auto-Call
8008 Shadow Oak Lane
Pasadena, MD 21122

Send all New and Renewal Subscriptions to:

Foundation For Amateur Radio
P.O. Box 7612
Falls Church, VA 22040-7612

Vienna Wireless Society
25 Years of Public Service

- Meetings: 2nd and 4th Fridays of each month, 7:30 PM, Vienna Community Center, 120 Cherry Street, Vienna, VA
- Repeaters: K4HTA/R 146.085 in/146.685 out, 222.340 in/223.940 out, 448.250 in/443.250 out, 443.375 in/448.375 out
- Nets: Vienna Emergency Net every Thursday at 7:30 p.m. 146.085/146.685. Pow Wow Net every night except meetings at 9:00 PM on 28.444, Slow Speed Code every night except meetings at 8:30 p.m. 28.390 MHz
- Information: Margy Patterson-N2JRG (703) 620-1727
- Training Classes: Paul Wilkins-AB4CY (703) 560-2779

VWS had a great Field Day this year, thanks to some terrific organizers led by Lisa - KD4DGO. We had a first rate Fourth of July display in downtown Vienna. We also had two very pleasant club picnic's at the Vienna American Legion in Vienna. THANKS TO EVERYONE who helped and participated.

Our Club was joined this summer by some new faces and newly licensed Amateur operators. WELCOME TO OUR FRATERNITY, and to "VWS" in our 30th year.

Instead of my regular article, I asked the Auto-Call Editor to publish the following letter that I had written to our Club's Vice-President.

4th of July, 1993

John Markey - W2AAW
VWS Vice President

Dear John,

I want to relate to you my very positive reaction to our VWS presence at this year's 4th of July

celebrations with the Town of Vienna. As you know, we had our VWS tables set up on the main circle behind the Community Center. It was a first-class display, John. The tables had our new VWS brochures, copies of QST Magazines, our Club flag, 2 and 10 Meter stations, four antennas, plus the tents and an assortment of supplies and batteries to demonstrate our emergency communication capabilities.

It was unusually hot that day, as you know. But there were no complaints. The crew there were excellent examples of dedication by operators wishing to help the public better understand what historic service is all about. They put up the site early in the morning; they put up with the weather; and they put up with the cranky visitors, mostly familiar faces with green white VWS T-shirts!

We should all feel proud of the group: George KD4DGQ & Lisa - KD4DGO, Bernie - KC4YMP & Ann - KD4KCT and others. They spent hours planning, Then they spent the whole day representing our Club and Amateur Radio in an exemplary fashion.

It is this very type of service that every one of us should recognize, and it is this type of unselfish dedication that will sustain our hobby in the years to come.

Very sincerely,

Mark Murray - WX3H
VWS President

Comments or Questions?

Send them to:

Doug Allen - Auto-Call editor
8008 Shadow Oak lane
Pasadena, MD 21122

Mount Vernon Amateur Radio Club

- Meetings: Second Thursday of each month, 7:30 p.m. (except December) Mt. Vernon Governmental Center 2511 Parker's Lane, Alexandria, VA 22308
- Repeater: WD4PDP/R 146.055 input 146.655 output
- Nets: Every Tuesday at 9:00 p.m. Starts on 2-meter then moves to 10-meter on 28.405
- Information: John KI4HK, (703) 780-2882 or Julie KD4WSZ, (703) 799-9466
- Training Classes: John Forrest WZ4A, (703) 971-3905
- Testing: Second Saturday of each month, 9:00 a.m. Robert E. Lee RECenter in Lee District Park 6601 Telegraph Rd., Alexandria, VA 22310
- Mailing Address: Mt. Vernon Amateur Radio Club (MVARC) c/o Frank Mackey N4GUS P.O. BOX 7234 Alexandria, VA 22307

"The bombs bursting in air..... and bursting and bursting and bursting. But that's the Fourth of July! MVARC was at Lee District Park for the celebration, along with a few hundred people and a few hundred degree of heat. Yes it was a typical August day in July: hot, humid, hazy. Water was the NET request of the day or please find me relief, I need some AC. Where are the trees? Many thanks to all the endurance achievers: Tom N4BV, Lynn AC4SM, Steve WB4EEA, Jeanne N4ZGI, Ed KC4EFJ, Marci KM4VM, Sean N1FFN, Bob KD4JQW, Bill KD4CNS, T.J. AC4HW, Frank N4GUS, Luis KC4NUE, Mary N4TCI, John KI4HK, Dick AB4JX, Frank KD4CCT, Mike KD4GCX, and Yancy N7RON. Me too, Julie KD4WSZ. Anyone else?

Welcome to our new member: Dale Pope KE4ALX. Our July visitors were: Benjamin Myers, Bill Fleming KE4BLU, Norm Johnson, Chuck Cook, Joan Bilger (XYL of W4OCC), Michael May, and Art Collier. Thank you for your company, Come again.

Marci brought a video tape from Handi-Hams for the July Program. They are a Minneapolis based non-profit organization assisting people

with disabilities to become Hams. Thank you Marci.

Calling all Hams, calling all handi-talkies--Call Steve WB4EEA (703)780-7248. Labor Day Weekend means the International Children's Festival at Wolf Trap, and Steve is looking for every available wo(man) and machine.

Gee, Steve WB4EEA is popular! He's also attending to MVARC apparel purchases: hats, tee shirts, jackets, etc. He and Mindy WQ9Q and Julie KD4WSZ have application forms.

Lee District Park in Alexandria, Fairfax County is the location for the monthly testing which occurs the second Saturday of every month. There is no charge and walk-ins are welcome. Preregistration and/or information is available by calling Frank N4GUS at (703) 455-1510. Also, call Frank if you are interested in being a VE or helping at the exams. You don't have to be a VE to help out and the more the merrier. Please arrive between 9 and 10 a.m. for testing.

"UPGRADE" is the name of the game. Novice/Technician classes will start again in September and General/Advanced/Extra classes there-after. All classes are open to anyone and everyone, free of charge. Your only investment is your time (well spent) and the book. Call John Forrest WZ4A (703) 971-3905.

MVARC will have its next meeting on September 9th. Come join us!

Julie, KD4WSZ

**All Shack Sale and Commercial Advertising
Should be sent directly to:**

**Doug Allen - Editor
8008 Shadow Oak lane
Pasadena, MD 21122**

**If you have questions about Advertising
please call Doug at:
(410) 437-6258**

Anne Arundel Radio Club

- Meetings: 8 PM 1st and 3rd Thursdays, Davidsonville Family Recreation Center, Queen Anne Bridge & Wayson Roads off MD Rt. 214 near Annapolis.
- On The Air: 2030 Thursdays when there is no club meeting on 147.705/105. Tuesdays at 2030 local time on 28.410. The Chesapeake Weather & Traffic Net on 147.705/105 at 1100 and 1500 every weekend day and public holiday from April 1 to November 15. MSN (Maryland Slow Net) every evening at 1930 on 3.7170 Mhz. The Aviation Net on 147.075 the first Monday of each month at 8:30 PM. The Packet Net every Wednesday at 9 PM on DCCONV Ch/13.
- Address: P.O. Box 308, Davidsonville, MD 21035
- Information: Margaret (Holly) Bevan, 301-923-0229

The Club's July 19th program meeting was held at the Satellite Earth Station Facility of the U. S. Naval Academy, or in the office of Club member Bob Bruninga/WB4APR. Bob and Frank Geraci/WB1FXX gave presentations on "Space Communications and Amateur Radio". The meeting was well attended with a rapt audience, interested in running packet via satellites.

Club Member Jeff Katz/N3KZV coordinated a very successful "CAM" (Cycle Across Maryland) Tour which started on July 25th in Cambridge, MD and ended 325 miles later on July 31st on the campus of Towson State University. Reports are that there were almost 1500 bikers and about 80 hams which participated. The bikers crossed Chesapeake Bay to the Inner Harbor on several tour boats. AARC members were well represented in the communicator ranks. They reported a good time and are already talking about "next year" when much of the route will be in Anne Arundel County and the bikers will cross the 2-lane Chesapeake Bay Bridge.

It was with sadness and consternation that Club members received the news that the Walter family will be leaving the area to move to Phoenix, AZ. They have become such a large part of the Club.

Dave (or Walt) /N3BFO served as Club president in 1990 and as director in both 1991 and 1992. He has become a "packet guru" to members who needed help in getting set up for packet. He served as a Committee of One to get the hamshack better equipped and organized for use by members. He has served as Trustee in FAR and was co-chairman of the last F.A.R.FEST. Anna/N3JYU is presently serving as Club Secretary. She has already upgraded to General and has served the Club in many ways. Eric/N3GZB is already out of the area. He completed Navy Boot Training in Great Lakes and has reported to school in San Diego. He came in 7th in his graduating class of 66 and won a meritorious advancement. We shall all miss the Walters a great deal for a long time.

Club members are looking forward to a second CQ CHOO CHOO on October 16th. Once again a Special Event Station will be a part of the tour. This family outing will leave Union Bridge, MD at 12:00 Noon and will return at 3:30 PM. The trip through Thurmont and up the mountain to Blue Ridge Summit, PA and back includes a full buffet diner, open bar, open sightseeing car and one or two luxurious private cats.

At the Clubhouse on July 10th Bob Israel/WC3I, Oscar Ramsey/NV3G and Charlie Tiemeyer/W3RMD gave 14 exams to 6 persons. Four tests were passed with one upgrade. Dick McKelvie/KE3HQ and Bob Baltz/N3MNT graded, Herman Turner WK3P was the runner and Bettye Tiemeyer/K3VRZ and Holly Bevan/N3BMB registered. Nancy Alley/NT3Z coordinated and Lois Turner/KA3VVQ was the lead VEC. The next testing session at the Clubhouse will be on September 11th.

Bernie Heill/N3BYM upgraded to General and Robert Kammer received the call N3POX.

73, Holly/N3BMB

Don't Forget Our Deadline!

Green Mountain Repeater Association, Inc.

- Meetings: Board of Directors/Control Operators, Last Monday each month.
- Luncheon: First Saturday each month, 11:30 a.m. at Fountain Cafe, Laurel Shopping Center Mall, U.S. Rt 1 (Baltimore Avenue) and Cherry Lane.
- Repeaters: KD3VR - 146.61 (Cheverly) and K3GXF - 146.88 (Greenbelt)
- Mailing: GMRA, P.O. Box 429, Riverdale, Maryland 20737
- Information: Boyd Nelson-KZ3Z (301) 434-0934

This is sort of a salute to repeaters, the many facets of their use and especially to those great and wonderful people who maintain and keep them running. The user friendly GMRA repeaters are no exception to these considerations. How many times has an emergency situation been made less traumatic? A visiting mobile unit helped to his destination, auto-patch to a relative of friend and last but not least the social meetings between old friends.

Just the other evening I was able to help a disabled mobile operator that had broken down on the 495 beltway. He asked if a call, by phone, could be made to his home to explain his dilemma and ask to be picked up at a garage. Its a great feeling when you can help someone thanks to the use of the repeater.

I imagine many of us key-up and expect the repeater to be ready for our transmission not realizing what goes on behind the scenes. Many hours of thankless time and effort to maintain is expended by a fine group of technicians and engineers who we may never know or meet. We as users can help by proper usage of these wonderful units and as members, keep our dues up to date and recruit new members.

GMRA Board of Directors

President:

Joe Nunemaker, KD3VR
Ph#: (301) 577-3749

1st Vice President:

Paul Freirich, W3HFA
Ph#: (301) 593-7205

2nd Vice President:

John Williams, N5SJR
Ph#: (301) 805-5761

Treasurer:

Boyd Nelson, KZ3Z
Ph#: (301) 434-0934

Secretary:

C.T. David, K3GXF
Ph#: (301) 577-5796

73's Ken Easton, N3HLY

AMSAT The Radio Amateur Satellite Corporation

- Meetings: Semi-annual - January and July
- Local Net: Sunday at 9:00 p.m. on 146.835 MHz FM, W3ZM/R, Greenbelt, MD
- Information: Pat Kilroy-WD8LAQ (301) 249-3396 or on packet WD8LAQ @ WB3V.MD

A SPECIAL RELATIONSHIP

The Radio Amateur Satellite Corporation (AMSAT) is a non-profit scientific and educational organization which backs the amateur space program. AMSAT enjoys special relationships with various individuals and organizations.

One such organization is NASA, in particular with respect to the Shuttle Amateur Radio Experiment (SAREX) payload that occasionally flies on board the space shuttles. SAREX has proved to be quite successful in sparking scientific curiosity, providing inspiration, promoting education, and instilling good study habits in students.

One such individual is the one who offers his or her time to help the cause of education using examples of radio amateur satellites in however a small way as it may seem at first.

Continued on Page 46

Prince George's Wireless Assn.

- Meetings: First Working Tuesday of each month, 7:30 p.m., American Red Cross Service Building, 6206 Belcrest Road, Hyattsville, MD 20782
- Club Station: K3CEZ
- Mailing: 4109 Kennedy Street, Hyattsville, MD 20781
- Information: Frank Holton-WA3ZMW (301) 927-1245

Last month, due to an unforeseen situation, we were unable to hold our meeting in the regular room. However, thanks to Charles, KA3COT, for having had an extra key made which should remedy that happening in the future.

PGWA usually holds a (SET) Simulated emergency Test in October of each year. The date and scenario has not been determined yet, but Dan, W3SWD, is working feverishly on that. With all the disasters occurring recently around our nation, not to mention other countries, it is only fitting for even local clubs to keep abreast of emergency communications procedures.

With PGWA club station K3CEZ being located in the Hyattsville, Prince George County Chapter of the American Red Cross Building we are able to work more directly as an Amateur Radio Communications group in case of a disaster involving Red Cross assistance.

Frank-WA3ZMW, has been bringing video tapes of Amateur Radio activities to show at our meetings. These tapes can be procured from ARRL headquarters in Newington, CT. All of this helps to liven up meetings. Also, one of our members, Frank Turano, KA3GAL is a member of the Mid-Atlantic Antique Radio Club and a collector of antique radio gear. Frank is also a member of the Goddard ARC and volunteers on Space Shuttle retransmissions. Les WA3NGF is also on the Mid-Atlantic Radio Club's mailing list and he brings interesting pamphlets.

PGWA welcomes new Hams and guests and is looking for new members to join our group. Our

HF and VHF gear is available for use by members with valid radio license. Remember! First Tuesday of each month at 7:30 p.m.

73's Ken Easton, N3HLY

AMSAT - Continued from Page 45

Another AMSAT special relationship is with the American Radio Relay League (ARRL). This column is not long enough to summarize each asset we've experienced during our association with the League since the origin of AMSAT almost 25 years ago. However, this column IS long enough to mention that the ARRL believes in the work of AMSAT: that AMSAT truly contributes to the general radio amateur community by getting worthwhile amateur radio satellites into orbit. In fact, the League is helping to raise funds for the current Phase 3-D project. Someone has to design, build, test, launch and maintain each amateur satellite and the cost is substantial.

The phrase "Phase 3-D" has nothing to do with funny colored eye glasses and three-dimensional pictures. "Phase 3-D" is the prelaunch designation for a new OSCAR satellite that is being built to be something for more hams than ever before! An AMSAT prelaunch designation contains a "phase numeral" and a "phase letter" to partially identify a satellite's mission. The phase numeral represents the series type of orbit as well as the general longevity planned for an AMSAT satellite project. The phase letter is a sequential description indicating the particular satellite and its order appearing in the series. For example, prior to launch OSCAR-13 was known as Phase 3-C; OSCAR-10 was known as Phase 3-B. In this sense, the microsats and other low-earth orbiting OSCARs may be considered "Phase 2" projects and the early non-recharging battery-powered OSCARs "Phase 1" projects.

The ARRL mailed a special fund raising letter over the summer to many League members. The letter contains a rather nice discussion on why each individual should actively support the Phase 3-D effort. An additional copy is available by calling ARRL Headquarters at 203-666-1547. Or contact AMSAT Headquarters locally to make your tax deductible donation by calling 301-589-6062. I hope you believe in this special relationship too.

Thank you. And, again, thank you to the ARRL!
73, Pat Kilroy-WD8LAQ



SILENT KEY

Robert C. Surina, W4KZQ, 77 became a Silent Key on July 31, 1993. He died of cancer at his home in Alexandria, Va. He was first licensed in the early 30s in Arkansas and was one of the early members of the Army Amateur Communications System. Bob's communications career spanned some 36 years with the Department of the Army in various military and civilian capacities. He was assigned to Station WAR in the Munitions Building as a high speed radio telegraph operator early in his career. Later he pioneered in the development and application of advancing technology from Boehme CW through Satellite and Digital systems for the Army's worldwide strategic communications. He retired as Director of Test and Evaluation for the U.S. Army Communications Command. He was a member of the Armed Forces Communications and Electronics Assoc. He was an avid amateur for over 60 years and was the mentor for many aspiring hams. He was the East Coast Net Control for the Signaleers Net made up of operators who had worked together during WW II and in Army Signal Agencies after the War. He will be sorely missed by his many friends and associates.

Submitted by Howard Bullock, W4LBM

CALL CAPS

Why wait for a ham fest to have your call and name custom embroidered on a quality poplin golf cap. Pick your cap color and thread color and we do the rest!
Your personalized call cap will be delivered to in 2-3 weeks.

Makes a great gift!

Cap Colors

Black White Red Yellow
Navy Royal Jade Gray
Neon Pink Neon Green

Thread Colors

Black White Red Gold
Navy Royal Jade Gray
Pink Fuchsia Orange

Send your Name, Address, Phone, Call and \$13.95 (plus \$3.50 S & H)* to:

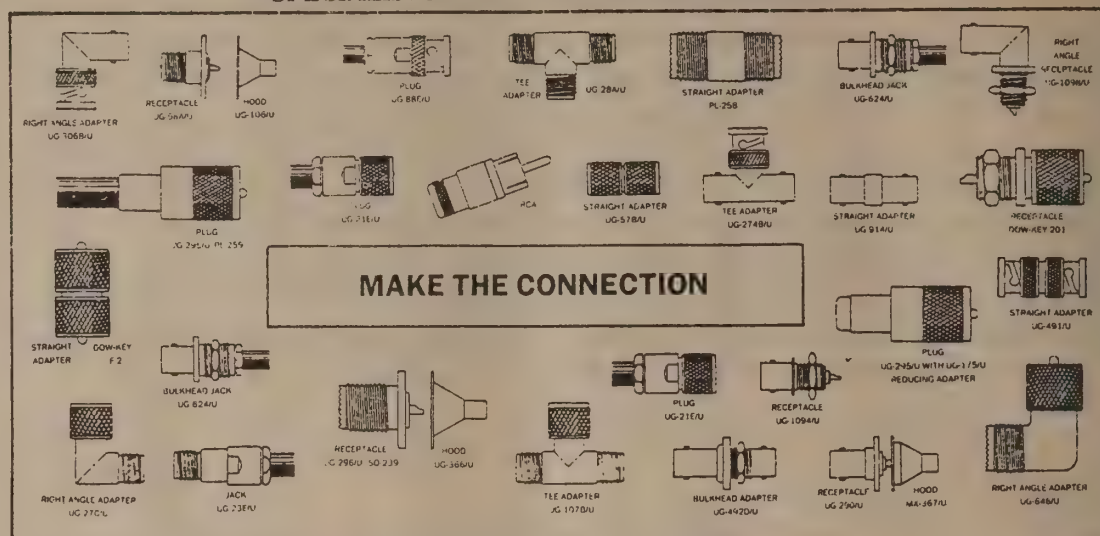
MUGS & STITCHES 42 REHOBOTH MALL
REHOBOTH BEACH, DE 19971
800-296-6847

Quantity and club discounts available. Phone orders accepted.
When in the Rehoboth Beach Area stop by to visit. Walt- N3OLY

*** We accept checks, Money Orders, Visa and MasterCard**

The R.F. Connection

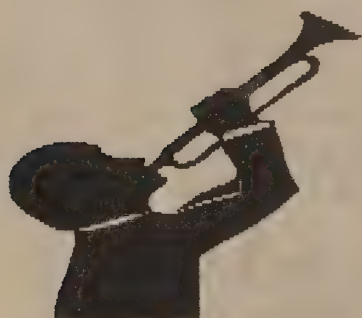
"SPECIALISTS IN RF CONNECTORS AND COAX"



The R.F. Connection

213 N. Frederick Ave., Suite 11, Gaithersburg, MD. 20877
301-840-5477

280



Amateur Radio of Hagerstown

23 North Locust Street

Hagerstown, Maryland 21740

(301) 714-0688

**Western Maryland's Ham Store has
Expanded to serve you better !**

**STOP IN OR GIVE US A CALL IF YOU ARE LOOKING FOR A GOOD DEAL
ON A NEW OR USED RIG. WE TAKE TRADES ON BOTH NEW AND USED.**

WE STOCK A HUGE VARIETY OF ANTENNAS FROM 50 MHz UP AND WE
HAVE THE CAROLINA BUG CATCHER and WD4BUM HAM STICKS FOR THE
H.F. BANDS. SEE US FOR BEARGAT SCANNERS AT MAJOR DISCOUNT
INCLUDING THE BC 890 XLT & the BC 700A. We have a nice selection of used
and GUARANTEED HF & VHF TRANSCEIVERS.

WE CAN SPECIAL ORDER ITEMS NOT NORMALLY CARRIED IN STOCK- TRY US.

AMATEUR RADIO OF HAGERSTOWN (301) 416 - 8079

FRED BAILEY, N3HTN, Mgr.

ELLEN HAMMONS, N3MZA, Associate

G AND G ELECTRONICS
OF MARYLAND

8524 DAKOTA DRIVE, GAITHERSBURG, MD.
20877

SPECIAL SALE

We have acquired the new
equipment inventory of a
ham radio store that is
closing.

While supplies last, we are
offering hundreds of
accessories from ICOM, AEA,
KENWOOD, YAESU, LARSEN,
RADIO WKS, HUSTLER, MFJ,
and others at prices
well below normal retail.

Remember,
quantities are limited, so
CALL NOW!

OPEN MONDAY & TUESDAY 11 AM - 9 PM
WEDNESDAY 11 AM - 5 PM & BY APPOINTMENT
301-258-7373

Shack Sales

Non-commercial advertising of Amateur associated equipment is available to subscribers of AUTO-CALL at a rate of 3 cents per word - with a \$1.00 minimum. Commercial vendors and non-subscribers rate is 17 cents per word - with a \$5.50 (1 inch) minimum. Special headings or special spacing (e.g. one item per line) may be used but such ads will be charged at the column inch rate.

Estate sales for Widows assistance handled by a FAR club will be published without cost.

Full name and address must be provided with each ad but need not be published. No ads will be accepted over the telephone and all ads must be pre-paid. Ads that will be running for longer than 1 month must be accompanied by a letter stating the length that the ad is to be run. Since no effort is made to investigate advertisers, no warranty can be applied.

ALL ADVERTISING & SHACK SALES - COMMERCIAL AND NON-COMMERCIAL SHOULD BE SENT TO:

Doug Allen, Auto-Call Editor
8008 Shadow Oak Lane
Pasadena, MD 21122
(410) 437-6258

Copy **MUST** be received by the 5th of the month prior to the month of publication.

ESTATE SALE - Em Mehrling, W4NH
Kenwood TS-440 w/P.S.
Kenwood TS-450 w/P.S.
Ten-Tec OMNI-D w/P.S.
Ten-Tec Triton IV w/P.S.
Ameritron Linear Amp, AL-80A
AMP Supply Linear. LK-500-ZC
HF Ants: Cushcraft R-7
Cushcraft A3S 3-el Yagi w/A-743
40 mtr kit. ICOM 290A 2M Base
Stn w/P.S.
Satellite Package:
Yaesu FT-726-R Dual Band
Xcvr (2M & 70CM) w/PreAmp,
solid state linears, and
circularly polarized ants
w/AZ-EL rotors.
Contact Robt Mehrling (703)-273-0737

ADVERTISE IN AUTO-CALL

WE GET RESULTS!

ESTATE SALE - Robt Surina, W4KZQ
Kenwood TS-520 w/P.S.
Kenwood TS-440 w/P.S.
Collins Lin Amp 30L1
Homebrew Lin w/ 813
Kenwood TR-7400A 2-M
Kenwood TM-321A 2-M
Contact Ted Knight 703-780-2226

WIDOWS ASSISTANCE -
Estate of Paul I. Wells, W4LQF
Icom 735 Transceiver, w/mike,
less pwr supply\$850
Drake L4B Linear w/pwr.....\$425
MFJ Electronic Keyer, MFJ 422X.....\$95
Commodore PC 128 w/2 Disk Drives,
1200 Baud Modem, 1750 Ram Expansion,
Mon & Epson FX 86E Printer.....Negotiable
Millen Grid Dipper, 1.7-300Mhz\$95
MFJ 206-Current Probe.....\$45
Heath Kit SB 610 Station Monitor.....\$75
Yaesu Loudspeaker w/audio amp SB102....\$35
Ameritron AL 811 Linear Amp.....\$525
Icom Phonepatch, ICSP2.....\$105
ARR Rcvr Preamp ARR SP144VDG.....\$49.50

WIDOWS ASSISTANCE -

Estate of Paul I. Wells - Continued

Icom - 2AT Trcvr w/case & Mike.....\$145.50
VTVM Heathkit, Mod V7a.....\$20
Astatic Mike D-104 w/Stand.....\$75
Sony Mike Cordiod F98.....\$30
Sony Mike, S25F.....\$30
Alpha Delta Ant. Switches -
Delta-2& 4.....\$15 & \$25
Mobile SWR Bridge, Swan.....\$28
Mike Electro-Voice 674A.....\$27.50
Kenwood SW2000, SWR Meter.....\$40
VTVM Hewlett Packard, Mod 4018.....\$55
Freq Meter BC-221-AF (Collectors Item) -
.....Negotiable
Test Meter unnamed.....Negotiable
Dummy Load, Heath HN 31 w/Oil -
and HN31A w/out oil.....\$35 for both
Speaker - Heathkit Mod HG24.....\$5.00
VTVM RCA Model WV-98C.....Negotiable
Vacuumn Capacitor, Jennings Radio -
Type UCS 375,-16000 Volts.....Negotiable
Telex 6 position earphone connector B
w/individual volume control.....\$5.00
Contact: WA3HFL, Tel: (302) 738-4077

WANTED: Copier, small, simple, preferably Canon, Must be in good working order; Also seeking video switcher with good isolation (at least 4 inputs); Also Rangefinder camera. Contact: G. Rose, KB4QGJ, 524 N. Quaker Lane, alexandria, VA 22304-1827-07, (703) 370-1880

WANTED: Amateur Radio QSL Cards. Collector will purchase any year(s), any quantity, Stateside or DX.- from earliest to the present. Please Call Collect Bob Reid, WX3G, Vienna, VA, (703) 560-0695

FOR SALE: QST's, Misc. Issues, 1916, 1917, 1919, 1920, 1923, 1924, 1926, 1927, and others 30's thru 60's. CQ's 1945-1947. Handbooks, 68, 70, 77. For list and prices call: Bob W4JNN, (703) 560-7161 or SASE to PO Box 166 Annandale, VA 22003

FOR SALE: MFJ-9030 30 meter, 5 watt CW Transceiver with MFJ-726 filter and MFJ-4114 Power pack (Batteries not included) Purchased New in Feb. 1993, Used 3 months.....\$235.00
Gessy 20R 20 amp 12 VDC -
Power Supply.....\$40.00
Approx. 38 feet unused Beldon -
9913 Coax.....\$15.00
Contact Ted Cohen-N4XX (703) 780-6397,
7-9pm M-F, 9am-7pm weekends

FOR SALE: Bird 43P peak reading RF directional THRULINE wattmeter with 2500H, 1000H, 250H, 50C slugs and CC-1 case. Used twice - guaranteed good as new -
(410) 343-2075.....\$475.00

FOR SALE: Yaesu YS-60 1.8-60Mhz
SWR/2Kw Wattmeter.....\$85
Yaesu FT-103R 220 Mhz HT w/CTCSS,
tonepad, wall charger, original & gain ducks,
original box and manual.
Plus FBA-5 drycell pack.....\$185
Pomona Elec. 30Kv probe -
w/carrying case.....\$45
United Electronics Laboratories Oscilloscope
Model E.....\$10
Extra Yaesu NC-9B wall charger -
(13V 45mA).....\$5
Ten Tec Paddle Keyer.....\$7
ICOM IC-12AT 1.2 GHz HT w/2 batteries,
drycell pack & BC-35U rapid desk
charger.....\$260
Please contact in evenings, Jay Madigan-
KC4UBM @ (703) 444-2633 Great Falls, VA

ANTIQUE RADIOS - 6-Tube Crosley Battery Model with Tubes and Cone Speaker; Atwater Kent early AC most Tubes; Sears Circa 1942 2-Band Table Model with Tubes needs minoe work. Contact John-K4AHS (703) 532-3246

FOR SALE: Butternut HF5B "Butterfly"
Compact Two Element Beam for
20-17-15-12-10 Meters, 5 DB Gain.....\$145
Joe Grimm-KJ4YB (703) 582-9447
Spotsville, VA

ESTATE SALE: W3ARA & W3WN

Kenwood 700SP, Two Meter ALL MODE Transceiver for sale. This equipment has been overhauled and aligned BY A PROFESSIONAL TECHNICIAN in July 1993.....\$325

Antique Telegraph Sounder, western Electric Sounder 3B 20 Ohms.....Best Offer (Several more available)

Ninty feet of RG213 coax cable.....\$25

Two Meter eight element Beam.....\$20

TRIPLETT 630 VOM, Like New with Leather Case.....\$45

Two Meter J-Pole antenna.....\$25

Commodore MP802 printer.....\$25

Smith Corona TP1 Daisy Wheel printer (works with Commodore).....\$35

Big Stick 11/10-meter vertical ground plane antenna.....\$25

Forty feet of 1/2" Hardline with N connectors.....\$35

Call Bernie-W3CAO at
(301) 271-2714 evenings

FOR SALE: Unused ALPHA 87A with thermostatically controlled auxiliary fan - more than two years left on warranty.....\$4,995.00

KLM KT-34XA with HEAVY DUTY BOOM in unopened carton.....\$850.00

(pickup only near Baltimore)

Unused HY-GAIN T2X Tailtwister rotator.....\$390.00

Call: (410) 343-2075

Your Ad Could Go Here: You can place your ad in Auto-Call Magazine by sending your ad to:

Doug Allen - Editor
8008 Shadow Oak lane
Pasadena, MD 21122
(410) 437-6258

VHF EQUIPMENT: Kenwood TH-225A HT with BC-7, PB-1, LH-5 SMC-31, TSU-4, PG3E and Larsen 5/8 Mag Mount antenna - used less than one hour - immaculate condition.....\$495.00

New KLM 2M-8 (2 Meter 8 Element)

YAGI.....\$90.00

Call: (410) 343-2075

JWO SERVICES

Discounts on All!

ARRL, AMECO, RSGB, CALLBOOK,
code keys, etc.

SPECIAL-SPECIAL-WHILE THEY LAST!
1993CALLBOOKS

Your choice INTERNATIONAL or
NORTH AMERICAN

(List \$29.95) Only \$22.50 each

1993 CALLBOOK SUPPLEMENT (\$14.95)

Only \$12.95

New! VHF/UHF DX BOOK (\$35) Only \$32.50

New! NOS Intro. TCP/IP Over Packet Radio.

Only \$21.50

NOW YOUR TALKING (List \$19)

1-9 \$17.30 each; 10-up \$16.25

Only \$0.30 handling per order

plus actual shipping cost

Special services for clubs and classes
call for details!

JWO SERVICES

12 Hickory Place

Camp Hill, PA 17011

Phone: (717) 731-4747 FAX: (717) 730-9373

Worldwide Shipments - Mastercard/Visa

Daily to 10 p.m. and weekend afternoons.

HF ANTENNAS: New Hy-Gain 2BDQ 80/40 trap dipole with 4000D Balun.....\$125.00

Hy-Gain 2BDQ with BN-86 Balun and new stainless steel hardware.....\$50.00

Butternut HF6V covers all bands 160 thru 10 - excellent condition.....\$150.00

(all antennas complete with documentation)

Call - (410) 343-2075

Don't Forget!

F.A.R. FEST 93

September 12, 1993

MID-ATLANTIC ANTIQUE RADIO CLUB

Become a part of the country's fastest growing vintage radio clubs. The Mid-Atlantic Antique Radio Club is an active group of radio collectors, restorers and historians. For a sample newsletter write to Joe Koester at 249 Spring Gap South, Laurel, MD 20707 - Phone (301) 725-4229

WORLD RADIO Amateur Radio's monthly newspaper can be delivered to your doorstep for only \$14 per year (\$24 overseas). Get the latest on how your fellow Amateurs use their hobby to help others. Regular features are Contest and Hamfest announcements, Aerials, Amateur Satellites, Continuous Wave, Digital Bus, DX World, Search & Rescue Communications, FCC Highlights, Mobile, New Products, Propagation, QCWA, QRP, Station appearance, Traffic, VE Exams, International News, Send your subscriptions to **WORLD RADIO**, 520 Calvados Ave. Sacramento, CA 95815

DISCOUNT PRICES AT RT ELECTRONICS

10/11 Meter radios, Antennas, Scanners, Power Supplies and more. Send or Call for a **FREE FLYER** - P.O.Box 2123 Warren, Ohio 44484 or Phone: (216) 369-1789 (8-4)EST, Fax: (216) 847-0614

SLIDE RULES WANTED

Buy or Trade for All Types
Bob Hill - NK3W
200 Agnes Lane, Linthicum, MD
Zip 21090-1702 (410) 789-4772

THE AMATEUR RADIO NEWS SERVICE is an organization of publishers and editors of Amateur Radio Newsletters and members engaged in public relations. Its purpose is to assist editors in any way possible. For more information, write to Lee Knirko - W9MOL, Amateur Radio News Service, 833 Park Plaine, Park Ridge, IL 60067

NORM'S ROTOR SERVICE
Rebuilt Rotors, Parts & Service
Call Norm Jewler - K3LYW
Frederick, MD 21701
(301) 874-5885

FOR SALE: Packet Radio Computers - \$250.00. IBM PC & Compatible with monochrome monitors, keyboards, and modems, ready to run packet radio with your software, TNC, and transceiver. Many upgrades including rigid drives available. Electronic Equipment Exchange, Purcellville, VA., (703) 338-1834. Hours - TU-FR 12 noon until 8 PM, Sat 10 AM until 5 PM

FOR SALE: Hard Line 3/4 inch 52 Ohms, 300 feet, New on Reel, will deliver if reasonable.....\$100
Call: John WB4KRM at (703) 364-2337

WORLDWIDE DISTRIBUTION



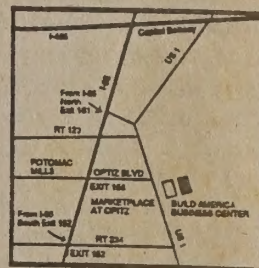
Curtis Brown
Manager
WB4KZL

14803 Build America Drive, Bldg B
Woodbridge, VA 22191
(703) 643-1063, 1-800-444-4799
Service (703) 494-8750

CALL TOLL FREE
(800) 444-4799
Woodbridge, VA

All Major Brands In-Stock

CALL, WRITE OR STOP BY FOR
YOUR FREE 92 PAGE CATALOG



AUTO-CALL POLICY

PRODUCTION POLICY

Copy for Auto-Call will be accepted in any form - handwritten, typed, compatible computer disk or modem. All hard copy is reformatted to preserve uniformity of style in the magazine. We use Word Perfect 5.1 for Windows for word processing, Ventura Publisher for page layout and CorelDRAW 3.0 - CD-ROM for Graphic Design. We also use a Full Page Scanner with WordScan OCR to scan text and graphic's directly into Ventura Publisher. Photo Styler is used to enhance and halftone images. We will accept 5.25" or 3.5" MS-DOS diskettes is ASCII format. Type all headers, bylines and body text flush left with no margins. Single space after periods, do not indent paragraphs and double space to begin new paragraph. If you have any questions please feel free to contact: Doug Allen - (410) 437-6258.

In determining space requirements, figure about 700 words per page (50 lines at 12 words per line) - not including the space taken up by headings, photographs, etc. Either black and white or color photos can be used as long as the contrast is good. Master copy, which is to be reproduced directly, should be in black ink on white paper and should be in proper page ratio, (Copy space is 7" wide by 9" high). Copy can be reduced or enlarged as necessary.

SHACK SALES

Deadline for copy is the 5th of the month preceding the publication date. Shack sales will NOT be accepted over the telephone. Full address must be provided for our reference but need not be published. Each ad must include the full name of the advertiser. If the full address is not included, we prefer to include the city along with the telephone number so that readers will know whether a long distance charge is involved. The entire telephone number - including city and state - is counted as only one word. We do not count postal zip codes. Otherwise, each word, abbreviation, model number or group of letter/numbers is counted as one word. Remittance must accompany each ad.

See next column for additional information on advertising. For further information, please phone the Auto-Call editor at (410) 437-6258, Pasadena, MD.

ADVERTISING

SHACK SALES

Non-commercial advertising of Amateur associated equipment is available to subscribers of Auto-Call at 3¢ per word - with a \$1.00 minimum. Commercial vendors and non-subscribers rate is 17¢ per word - with a \$5.50 minimum.

Special headings or special spacing may be used (e.g., one item per line) but such ads are charged at a column inch rate - \$1.00 per column inch for non-commercial ads, \$5.50 per inch for commercial vendors and nonsubscribers

Commercial vendors should include the ad size and length of run (e.g., 1 year, 6 times, etc.) on company letterhead and it must be signed by the person authorizing payment for the ad. Full name and address must be provided with each ad but need not be published. No ads will be accepted over the telephone. Since no effort is made to investigate advertisers, no warranty can be implied.

DISPLAY ADS

DISPLAY ADS are "boxed" and may contain artwork or photographs. They may be placed along with the shack sales or displayed in other sections of the magazine. Requests for specific locations will be honored if practical but cannot be guaranteed.

Display ads are charged according to size and duration of run as shown below. All advertising must be prepaid for at least the current month.

Page	Col./inch	Rates per Issue			
		1 Year	6 Times	3 Times	1 Time
Full	18	\$75.00	\$90.00	\$100.00	\$105.00
1/2	9	55.00	65.00	71.00	75.00
1/3	6	40.00	46.00	51.00	54.00
1/4	4½	33.00	38.00	41.00	43.00
1/6	3	22.00	26.00	28.00	30.00
1/8	2¼	17.00	20.00	22.00	23.00
1/9	2	16.00	19.00	21.00	22.00
1/18	1	8.50	10.00	11.00	11.50

Based on camera-ready copy

Extra charge for halftoning photos and for in-house artwork and layout.

Copy must be received by the 5th of the month preceding publication date.

(e.g. Copy for November issue must be received by 5th October)

All Advertising Must be Pre-paid



JOIN ARRL

BENEFITS FOR YOU

QST, QSL Bureau Awards, Low Cost Insurance, Operating Aids,
Government Liaison and More - Much More!

MEMBERSHIP APPLICATION

NAME _____ CALL _____

STREET _____

CITY _____ PROV./STATE _____ PC/ZIP _____

\$30 in U.S. \$42 elsewhere (U.S. funds) Licensed amateurs or age 65 and over, upon submitting proof of age, may request special dues rate of \$24 in the U.S. \$36 elsewhere in U.S. funds. Persons age 17 and younger may qualify for special rates, write for application.

For postal purposes, fifty percent of dues is allocated to QST, the balance for

VISA, MC, AMEX, DISCOVER # _____

Signature _____ Expires _____


The American Radio Relay League
225 Main St.
Newington, CT. 06111 USA

AUTO-CALL

Atlantic Division Director
Hugh Turnbull, W3ABC
6903 Rhode Island Avenue
College Park, MD 20740
Phone: (301) 927-1797

Roanoke Division Director
John Kanode, N4MM
Rt.1, Box 73-A
Boyce, VA 22620
Phone: (703) 837-1340

September 1993

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 BARC MARC	2 Anne Arundel Summit VOA	3 Mobileers SEES Shenandoah	4 Green Mtn. Stafford
5	6	7 Antietam IBM PG Wireless	8 **FAR** Pentagon S. Patuxent	9 AMRAD MADRAS Mt. Vernon N. Virginia QCWA 150	10 Alexandria SMARC Vienna	11 Stafford
12 (MetroCom) 3/6/9/12	13 (9 thru 56/7/8 vary) (PVRG) Carroll County Dept. of State	14 Fauquier Frederick Leisure World Woodbridge	15 BARC Goddard MARC QCWA 137	16 Anne Arundel QCWA 20	17 Rock Creek Shenandoah	18 Capitol City Stafford
19	20 Culpeper Ole Va Hams Sterling Park	21 4/6/8/10/12 Antietam Arlington	22 Laurel	23 MADRAS St. Marys	24 Central MD Vienna	25 (Last) Moose Stafford